



## **ABSTRACT**

Title of Thesis: GATEWAY TO THE CITY: A TRAIN STATION  
REDEVELOPMENT PROJECT IN MELBOURNE,  
AUSTRALIA

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Degree and Year: Master of Architecture, 2003

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Spencer Street Station has been essential to the development and prosperity of Melbourne and the State of Victoria since it opened in 1857. The areas adjacent to the site became industrial developments, pushing residential development to the east of the city. The existing station was built in the early 1960's and lacks facilities such as comfortable waiting areas, public open space, roofs over the platforms, and convenient subway connections. Current plans are to redevelop not only the Spencer Street Station but also the entire surrounding docklands area. In a country where train travel is one of the primary connections between the country and the city, the redevelopment of this primarily interstate passenger and freight train station is vital to the life of the city.

The focus of this thesis will be the design of a train station with modern facilities, public space both interior and exterior, retail stores and restaurants, as well as areas for bus, taxi, and tram transfers. Moreover, the Spencer Street Station will be a landmark and act as a gateway between the Central Business District and the Docklands area. This thesis will not attempt to redevelop the entire Docklands site, but will take into consideration current plans for the area.

Academically, I am interested in examining: the train station typology; the role transportation systems play in the development of a city; the role this station plays in the development of the docklands; and the idea of the building as a gateway.

GATEWAY TO THE CITY: A TRAIN STATION REDEVELOPMENT PROJECT IN  
MELBOURNE, AUSTRALIA

By

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Thesis submitted to the Faculty of the Graduate School of the  
University of Maryland, College Park in partial fulfillment  
of the requirements for the degree of  
Master of Architecture  
2006

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## **DEDICATION**

This project is dedicated to my parents whose tremendous support and patience has made all of this possible.

## **ACKNOWLEDGEMENTS**

This thesis owes a great debt to all those who have contributed their help and encouragement throughout the process. First I owe a tremendous gratitude to my thesis chair, Karl F. G. DuPuy and to my committee and to the School of Architecture. Additionally I would like to thank Bruce Bannerman, GIS Strategy Officer, Linda Lew, Architect – Spencer Street Station Redevelopment of the Department of Infrastructure of the state of Victoria and Alan Kyles, for their assistance in obtaining relevant maps and data for the Spencer Street site. A special thank you goes to Hugh Newell Jacobsen for his advice, critique, and introduction to the field of Architecture. Furthermore, I would like to acknowledge my friends, Eric Jack Baker and Carl Holden for their assistance in the final hours of the project. Finally, I would like to thank my dear friend, AJS, for having made possible a conversation that lifted my spirits when I most needed it. To these great people, I wish to express my sincerest gratitude.

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## INTRODUCTION

The advent of rail travel and industrialization had a tremendous impact on the form and growth of cities around the world. The relative decline of industry in recent years due to the rapid increase of “paper” industries and virtual transactions combined with the development of faster means of transportation have caused many of our once thriving ports and stations to fall into disuse. The challenge of today is to adaptively reuse these locations to enhance our cities and serve today’s needs.

The formation of rail networks throughout the world fueled industrialization and unified whole countries. Urban centers tended to grow around rail stops as the train allowed formerly isolated areas to participate in the growth of trade and prosperity associated with the industrial revolution.

Because train stations had such influence on the existence, prosperity, and urban form of their cities, the station tended to take on almost iconographic importance. While stations were often located at the edges of established cities, figuratively they tended to be considered at the heart of the city. As a result, stations tended to have urban hierarchy reserved for civic monuments and religious institutions. The station represented a point of entry or exit to a city, and therefore had meaning urbanistically as a gateway and practically as a point of dispersion from one location to another.

The importance of train travel and train stations to the livelihood of our cities resulted in tremendous public affection. The grandeur of stations combined with the prospects of adventure, romance, escape, and mystery offered by destinations formerly inaccessible gave stations and train travel a certain and distinct image in the minds of the public. The art and literature of the time reflect this attitude.



As the 20<sup>th</sup> century progressed, the economic and symbolic importance of rail travel declined as it was replaced by faster modes of transportation. Access to the city no longer took place at a finite location, as the car permitted entry at almost any point. Entry to the city and any architectural significance became a secondary consideration to the image of the city.

As a gold rush boom town, Melbourne, Australia depended on the rail and its proximity to the river for its prosperity. With the Flinders Street and Spencer Street stations in place, the river steamer and horse-drawn coach were almost completely replaced. Flinders Street station was primarily a suburban passenger train while Spencer Street Station with its proximity to the Yarra River and the Queen Victoria Market was responsible for moving good and produce and for interstate travel. The railways also stimulated industries such as coal-mining, timber, engineering and building. The difficult terrain and remoteness of the outlying regions made train travel necessary for any connection the city and the rest of the country. The eventual development of the tram in Melbourne solidified the importance of public transportation in and around the city, and to this day, train and tram travel is of vital importance to the health of the city.

Today, the waterfronts once vital to cities have fallen into relative disuse providing opportunities to redevelop the waterfronts for non-industrial uses. The docks in Melbourne are under-utilized as there has been a relative decline in the shipping industry. This provides an opportunity to expand the city and provide more resources to it. Melbourne has already taken advantage of its proximity to the Yarra River in this respect by developing a 6-acre region along the south bank of the Yarra completed in 1994.

The Spencer Street Station site is located at the juncture between the existing city fabric, known herein as the Central Business District, and the underutilized Dockland's site. The city is in the process of redeveloping the waterfront and intends for the station to act both functionally as a transportation hub and metaphorically as a gateway to the city and a connector between the CBD and the waterfront.

**Train Stations and  
Their Role in Architecture**

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### *Development of a Typology*

The first railroad station responded to the development of technology that allowed the first means of mechanized transportation, the train. During the 1800's, train travel became the primary mode of transportation, necessitating the development of a new building type to service the growing industry. The new technology of the industrial era influenced the development and evolution of the train station, and stations continue to be grounds for experimentation with new ideas both typological and technological.

Traditionally, the station is a simple building type with tremendous urban responsibilities. The primary spaces, the ticket hall, the waiting area, and the train platform, were generally arranged axially to provide maximum functionality to the experience of travel. While the relationship of the major spaces was and continues to be relatively simple, the relationship of the station to the city was quite complex. The station certainly developed importance because of its symbolic nature, but its importance was not entirely due to the social conditions of the time period. The rail station was perhaps the most characteristic building type of the late 19<sup>th</sup> and early 20<sup>th</sup> centuries and as the introduction of railways into our cities often necessitated cities to be replanned to accommodate the infrastructure, stations often became the focus of the redevelopment. As a result they were often the most prominent and well-known buildings in the city center. Additionally, because stations were without architectural precedent, stations tended to be diverse and lacking in a universal style; this resulted in a certain whimsical quality that tended to obscure more traditional building types in the city. As the station now represented the point of entry into the city, it also had a responsibility to act as a gateway and threshold to the city.

Country stations and city stations varied tremendously. While the functional elements remained the same, country stations tended to resemble houses and shacks while city stations were opulent feats of technology. Certainly this was related to the size of the city or town and the number of trains that serviced the station, but city stations tended to be much larger and grander than necessary. The city station's symbolic responsibilities were much greater than its functional ones. It had to reflect the image and character of the city.

By the middle of the 20<sup>th</sup> Century, faster modes of transportation had diminished the importance of the train and therefore the train station. The speed and availability of planes and automobiles caused trains to be replaced as the primary mode of transportation. Many country stations fell into disuse or were demolished because these regions were now connected to the city through the automobile and the station had become unnecessary. Even some of the great city stations were demolished because of the increase in land values in the city.

Today there has been a revival and renaissance of train travel and therefore the train station both through redevelopment and through new construction. As the 19<sup>th</sup> and 20<sup>th</sup> century stations were often connected to the city through other forms of transportation, stations became hubs for both rail travel as well as other means of transportation such as subways, trams, taxis, buses, etc. As a result, it is not uncommon for one of the primary uses of major stations to be commuter traffic via subway or light rail. In recognizing the shortcomings of many of our underground stations, bus depots and stops, the station's reason for being has been revived. While they still service traditional train travel, they also act as major stops in our subway and light rail systems.

With public transportation becoming increasingly popular in our cities as a solution to pollution, congestion, and in today's world, terrorism, we are starting to recognize again the importance of the rail station both symbolically and practically to the architecture, image, and experience of our cities.

### ***Precedents***

As the train station has such varied form and expression, it is important to examine some examples of this multifaceted type before embarking on a design project. I have chosen several station projects to illustrate the development over time of the various expressions of character of train stations, their responsibilities to the urban context, and the functional and technological issues associated with train station design.

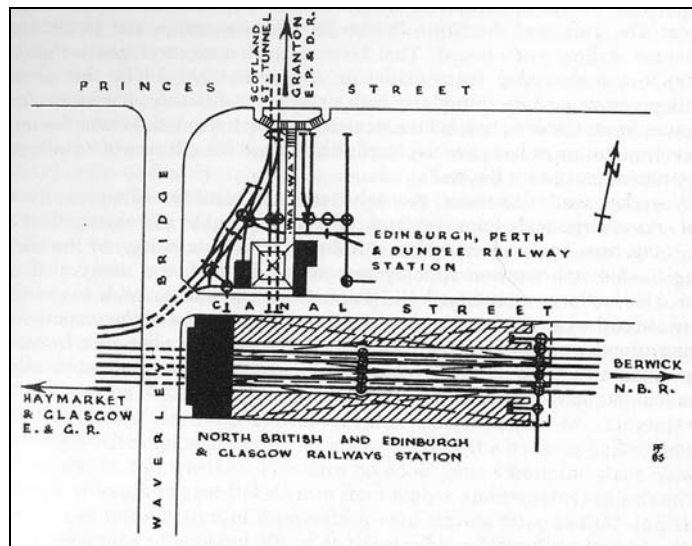
### **Location: Waverly Station, Edinburgh, Scotland**

This station has been chosen because of its site and urban responsibilities. The station sits within Princes Street Gardens between the Medieval city and Craig's New Town, hence, it has responsibilities to knit the two pieces of the city together much in the same way that Spencer Street Station must connect the CBD and the docklands.

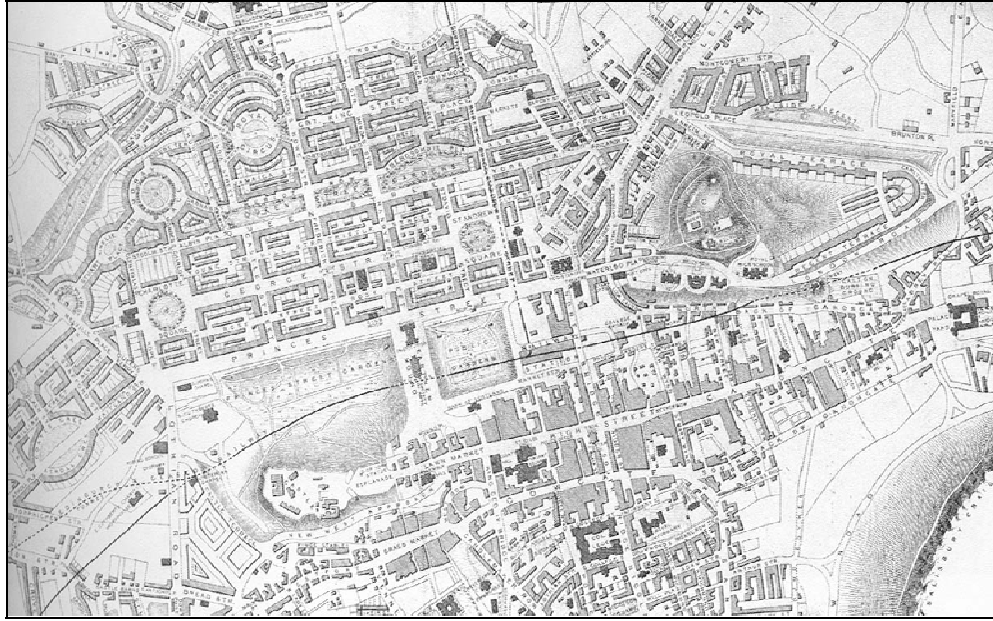
The plans for Craig's New Town were approved in 1766. His plan was to locate a new town adjacent to the existing city with the intention of alleviating the congestion of the winding roads and extreme topography of the medieval city. The result was a grid-iron plan of large blocks subdivided by a pattern of alleys. The eight central blocks were bounded on either end by residential squares. The new town connected to the existing city across a large garden space.

Despite desires to protect these gardens, the only location for the Edinburgh station was within its boundaries, and in 1846 the rail line was brought in through the gardens. The station in its original configuration was considerably inadequate, so eventually more of the garden land was given over to expand the size of the station and the number of lines through the garden. The height of the station was restricted to 42 feet to prevent the station from dominating the gardens and views of the city. The new station opened in 1900 and required the rebuilding of North Bridge and Waverly Bridge, and Waverly station became the largest in Britain until the redevelopment of Waterloo Station.

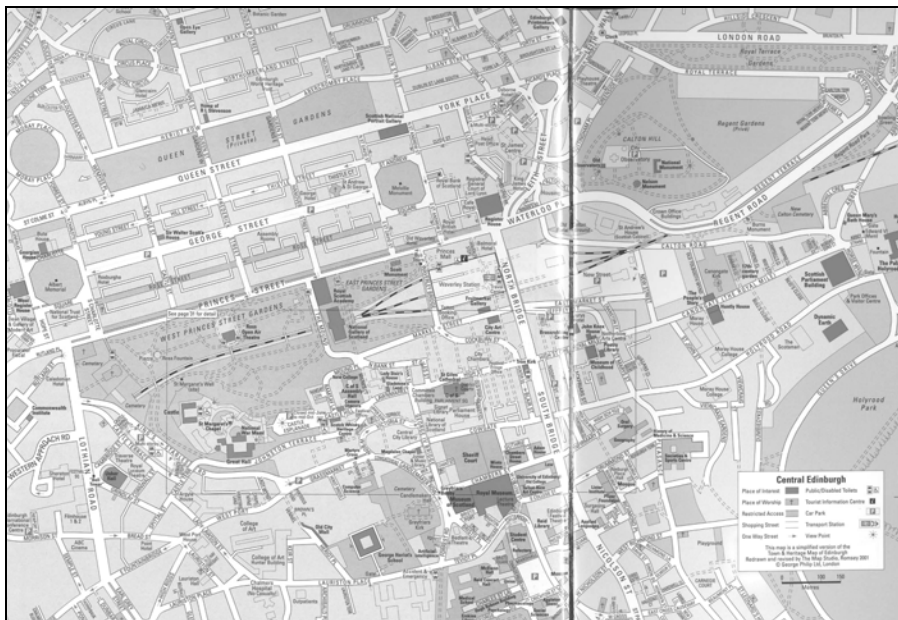
The responsibility of the station to remain unobtrusive within its garden setting while helping to knit the two sections of the city together is remarkable. The following images describe its role in the urban fabric of the city.



**Figure 1: Plan of Princes Street Station<sup>1</sup>** Plan shows the organization of the original station located on the site. The station was accessed via bridges, while the platforms were located below at the level of the gardens.



**Figure 2: Plan of Edinburgh<sup>2</sup>** Shows the location of the original station on axis with St. Andrew Street and between Waverly and North Bridges

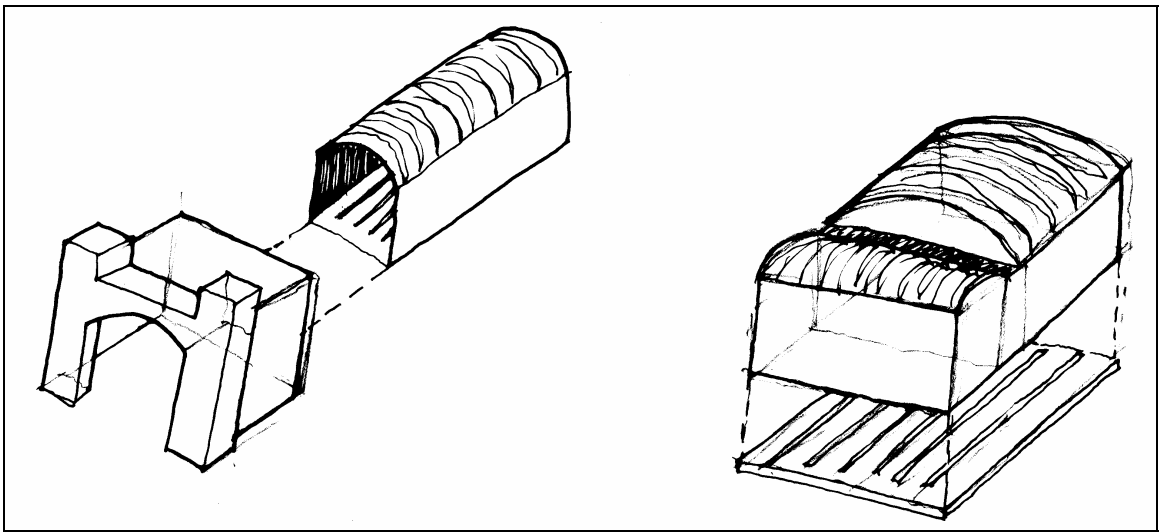


**Figure 3: Map of Edinburgh<sup>3</sup>** Map shows the location of Waverly Station and rail lines within Princes Garden. The station is located in the valley between the medieval city and Craig's New Town. The gardens and station can be accessed from the adjacent streets via stairs and paths that also cross the tracks at various points. The topography of the area allows the station to exist within the garden without affecting the visual relationship between the two parts of the city.



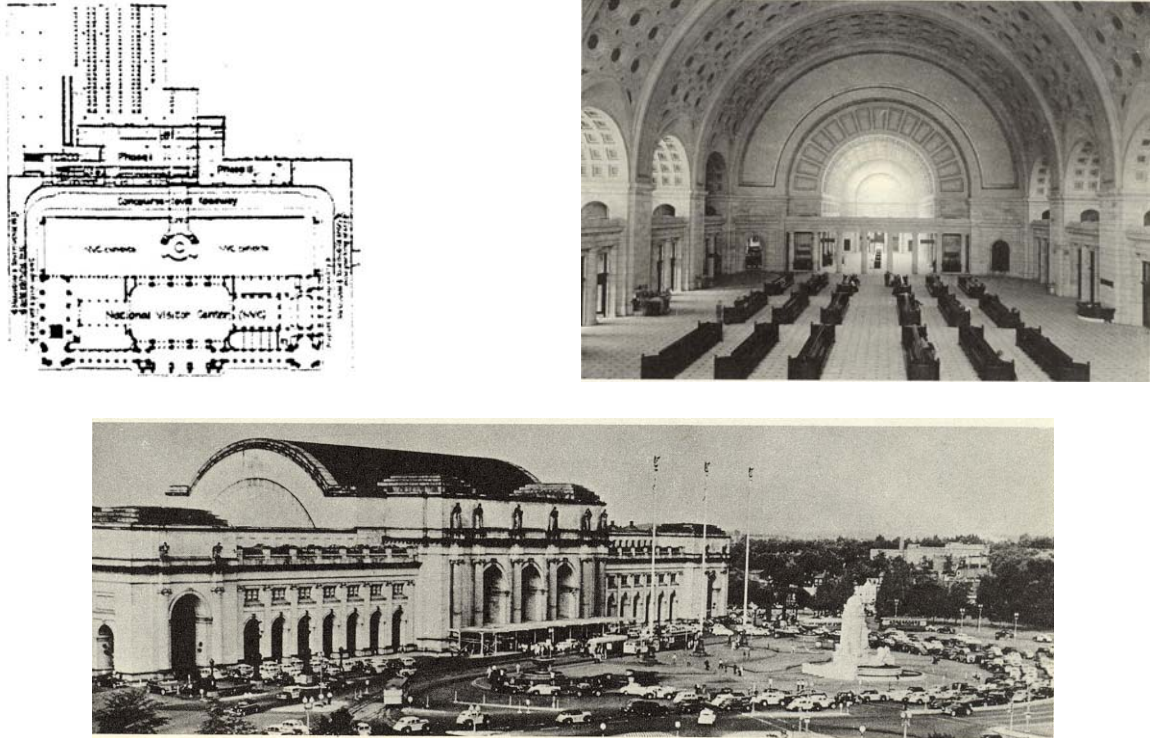
## Function – Pennsylvania Station and Union Station

Train Station typology, as has already been stated, was extremely varied as it was a new building type. However, stations tended to fall into two categories depending on the site restrictions: head-tail buildings and bridge buildings. Head-tail buildings were comprised of a front building that housed all of the service and formal functions of the building and a shed that was attached to the front building on axis. Bridge stations placed all of the formal functions on one level, and the tracks passed underneath the station.



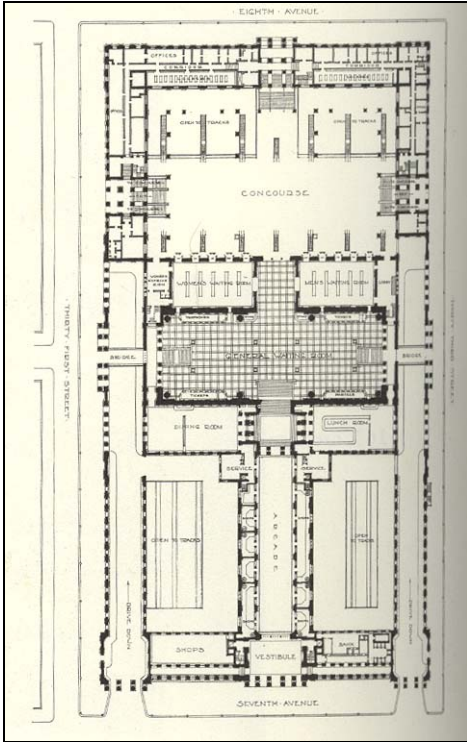
**Figure 4: Train Station Typologies** The two types of traditional stations are illustrated diagrammatically.

Union Station, designed by Burnham and Root in 1909 was part of the redevelopment of Washington, DC as part of the McMillan Commission Plan. The station is located North of the Capitol Building with proximity to the National Mall. Years of disuse closed the station until it's reopening in 1988. Today it houses Amtrak and Metro train systems. There is also a large retail mall located within the station.



**Figure 5: Images of Union Station<sup>4</sup>** Images show plan, interior of the concourse, and exterior. The plan shows the circulation through the major spaces in the station and the relationship between the platforms and the head building. The exterior view shows the massing of the building and reinforces the importance of circulation through the building. Interior view shows the character of the spaces within the station.

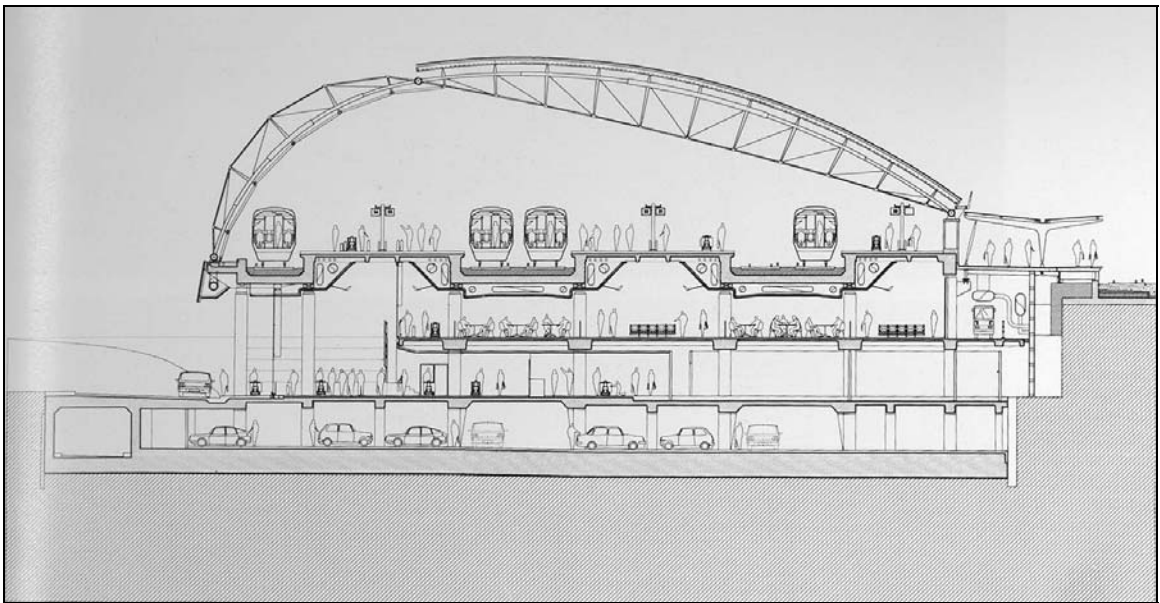
Old Pennsylvania Station in New York, designed by McKim, Meade, and White in 1906, is an excellent example of the bridge type of station. The station fell prey to the decline in railroads and was demolished in the 1950's to accommodate the construction of Madison Square Garden. It was once considered one of the finest stations ever built. All of the major spaces are located on the main level with the platforms running below. The circulation through the building is clear with an entry hall, concourse, waiting room and arcade located at the heart of the building on axis, but unlike Union station, the user circulates vertically to access the platforms. The floor of the concourse has transparency to the platforms below through openings in the floor, so the user is perpetually aware of the energy of the trains below.



**Figure 6: Images of Pennsylvania Station<sup>5</sup>** Images show the plan of the upper level, the general waiting room, and the Concourse. The plan illustrates the circulation through the plan. The image of the concourse and the waiting room show the character of the spaces.

## Modern Station – Waterloo International Terminal

The modern train station has a responsibility to be recognizable both as a transit center as well as a major public building while continuing the tradition of experimentation in structure and style. Waterloo International Terminal, designed by Nicholas Grimshaw and Partners in 1993, is an excellent example of the transformation of the traditional train shed using modern technology and materials. The site constraints required Grimshaw to create the terminal on four levels with the platforms located on the uppermost one. While this is a reversal of the bridge type station, the project successfully merges the two types, creating a new interpretation of the station typology.



**Figure 7: Section of Waterloo International Terminal<sup>6</sup>** Section shows the relationship of the major spaces. The platforms are located on the upper level, below that are the departure and arrival lounges on separate levels, and on the lower level is parking and offices for the management of the station.





**Figure 8: View of Platforms of Waterloo Station<sup>7</sup>** The roof of the station is divided into two parts – transparent glass on the outer edge offering views of across the river, and a ridged roof with alternating panels of glass and solid. The structure of the roof is an arch made of two trusses pinned together at the top.

### ***Role in Australian History***

In Australia, rail travel has been the major connector between the city and the country. Tram travel is the primary transportation within the city and suburbs. As Melbourne has a relatively young population and vehicles are costly, trams make possible inexpensive travel. Country stations in Australia are typologically very similar to those found in America, however, outlying regions are relatively undeveloped, so these stations provide necessary access to the cities for education, shopping, and cultural events. Primary city stations continue to be sites for grand buildings, and in the modern age, for technological achievement.

In the city of Melbourne there are two major stations. The first being the Flinders street station which has a tradition of being primarily a suburban station and has a

traditional facade that houses shops and offices and provides connection across the Yarra River to the park system and newly developed South Bank areas. Recently there has been development of the air rights over the tracks adjacent to the station known as Federation Square. Traditionally, Spencer Street Station had the responsibility of a freight and interstate connector. Given that role, Spencer Street Station was certainly less attractive than its sister station and had an industrial and typically 1970's appearance. Today, with the anticipation of tremendous growth over the next ten years, the station and surrounding zones are to be completely redeveloped to provide a true edge to the CBD as well as to make a clear connection between it and the new docklands development.

Typologically, the train station has developed much in the same way European and American stations. However, as Australia's land is highly undeveloped outside of the major cities, their architectural efforts seem to focus on modern buildings that make an international statement about Australia's achievements. Additionally, there is a tradition of competition between Melbourne and Sydney, so major public buildings such as train stations become grounds to show off and one-up the other city. That being said, the typology of the station is not significantly different from other countries. Elements such as circulation, access to a variety of transit options including pedestrian access, and providing a grand entrance to the city remain the same, with modern improvements and experimentation that provide the city with iconographic stations and buildings that reinforce Melbourne's place architecturally and technologically within the world.



### ***Recapturing the Waterfront***

Over the past 30 years, there has been a movement to recapture the waterfronts of our cities. Once vital industrial zones of our cities, these dock areas fell into disuse as air shipping became more affordable. Cities have discovered that these blights on the appearance of the city can be redeveloped, adding valuable resources to the city.

There have been several different philosophies about the approach to the design of our waterfronts. Some of the prevailing attitudes included redesigning the physical nature of the waterfront itself by dredging or filling in the land. Fortunately in recent years the city waterfront has been acknowledged as a functional and attractive asset, and planning attitudes now embrace the water part of waterfront and provide housing, recreation and retail opportunities along them.

There is a larger history of waterfront redevelopment throughout the world. I will examine aspects of the London Docklands redevelopment, as this precedent will provide excellent resources for the consideration of Melbourne's plan for their waterfront. London's ports provided a link between the city and the rest of the country and allowed for the trading and transportation of goods because of its proximity to the Thames River. The development of the docks was largely due to companies such as the West India Company that built docks that allowed ships to dock adjacent to their warehouses. As trade of goods increased during the Industrial Revolution, new docks were built along the Thames. Traditionally docks and warehouses were protected by high walls. As work at the docks was increasingly dangerous, better working conditions were demanded, and docks and shipping businesses became increasingly expensive and inefficient. The solution was to develop container lorries that allowed the use of cranes to load and



unload ships. By 1980 many of the docks along the Thames were closed due to competition with other European ports and lack of room for modern ships. In 1969, there was a revitalization of St. Katherine's Dock, near the Tower of London. Established in this area were a large hotel, marina, housing, and large office buildings.

During the 1980's and through to the present the Docklands of London have been completely redeveloped to include mixed use buildings and to take advantage of Thames River that had previously provided London with its reason for being. The London Docklands Development Corporation, headed by Bob Mellish, proved commercial infrastructure at Canary Wharf which has since become a dominant feature of London's skyline. Housing, an airport, a university, and an exhibition center have added to the docklands redevelopment revitalization to reclaim valuable real estate. The revitalization of the docklands and edges of the Thames River provided opportunities for development that contribute to the prosperity of the city. The development, particularly of Canary Wharf, provides a waterfront esplanade, housing, retail, and restaurants. The planning of Canary Wharf was a layout of blocks and a hierarchy of streets that allowed for a walkable and accessible area. A series of outdoor spaces framed by buildings and connecting level changes provided comfortable spaces and connectivity for the pedestrian. Additionally in 1999, underground tube station and light rail stations opened for passengers providing immediate connection between the city and Canary Wharf.

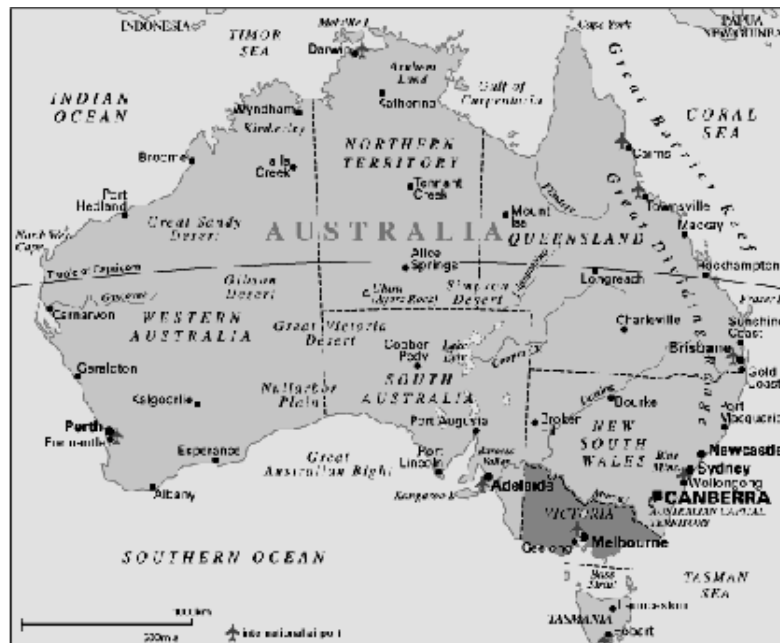
The docklands and Yarra River of Melbourne offer similar opportunities for development. The South Bank region is already a prosperous area with broad pedestrian walks allowing for artists to display their work and for massive development of mixed-use and public buildings. As Melbourne grows (it is anticipated that the population of

Melbourne will nearly double over the next 20 years), they intend to develop the entire docklands area which had previously been an industrial blight on the city. Today, the infrastructure of the station, train and tram lines, and streets have been redesigned. With the building of the Telstra Dome Stadium, Bourke Street pedestrian bridge, designed by Wood and Marsh, and the Collins Street connector provide the backbones for the development of the docklands. Unlike the London docklands and Melbourne's CBD, the plan for Melbourne's future city is less traditional with respect to a system of repetitive blocks and streets and takes on a more whimsical and almost Medieval system blocks and streets that make a clear delineation between the CBD and the Docklands. During the past 3 years the Docklands have developed into a broad pedestrian esplanade and wharfs, enormous office and housing complexes as well as shopping and restaurants. The air rights over the tracks adjacent to the Spencer Street will become a massive retail mall catering to discount and factory outlets that will allow country passengers immediate access to shopping and restaurants that will revitalize that edge of the CBD.



## Australia, The Yarra Valley, and Greater Melbourne

The chosen site for this thesis is located in the state of Victoria in the southeastern tip of the Australian continent. The City of Melbourne is the capital city of Victoria as well as the state's hub of business, international trade, arts, entertainment and sporting activities in addition to offering employment, shopping, leisure and other cultural opportunities for all Melbourne residents. The City of Melbourne can be characterized by its large collection of historic Victorian buildings, its extensive and world-renowned parks and gardens system, and its image as a livable and diverse city.



**Figure 9: The location of the state of Victoria and the city of Melbourne within the Australian Continent.**

Melbourne and its suburbs surround Port Phillip Bay and extend North to the Foothills of the Dandenong Mountain Ranges. The city center is approximately two miles inland on the North bank of the Yarra River which forms the southern boundary of the city center.



**Figure 10: Plan of Melbourne and Vicinity**

The population of Melbourne as of 2001 was 57,200, and it is expected to grow to at least 70,000 by 2010. The rapid population growth creates new challenges for the City and necessitates increased facilities, services, and employment opportunities as well as efforts to manage the effects of this growth on the environment. The people of Melbourne are a highly diverse group with a relatively young population; an estimated 44% of the population is between 15 and 29 years of age. This reflects the high student resident numbers and the popularity of the inner city with young people who demand affordable and appropriate housing, recreation, and social opportunities

#### **The City of Melbourne**

|                                  |            |
|----------------------------------|------------|
| Area                             | 36.5 sq km |
| Estimated Residential Population | 57,200     |
| Daytime Population               | 567,000    |
| Total Length of Roads            | 315 km     |
| Total Area of Parkland           | 565 ha     |
| Total Number of Businesses       | 14,915     |
| Total Number of Dwellings        | 24,391     |

#### **Central Business District**

|                            |            |
|----------------------------|------------|
| Area                       | 3.54 sq km |
| Total Number of Dwellings  | 4407       |
| Total Number of Businesses | 9352       |

#### **In Comparison With Metropolitan Melbourne**

|                                  |            |
|----------------------------------|------------|
| Area                             | 8806 sq km |
| Estimated Residential Population | 3,417,218  |

The City of Melbourne is the seat of the Victorian Government and the headquarters of many state, national, and international companies, non-government organizations, and Australian Government Agencies. Its proximity to the Asia-Pacific region makes it a highly sought location for regional headquarters for companies expanding into Asia. It is the state's transportation hub and its role therein will increase significantly as transport and freight links improve within the Central City and the region.

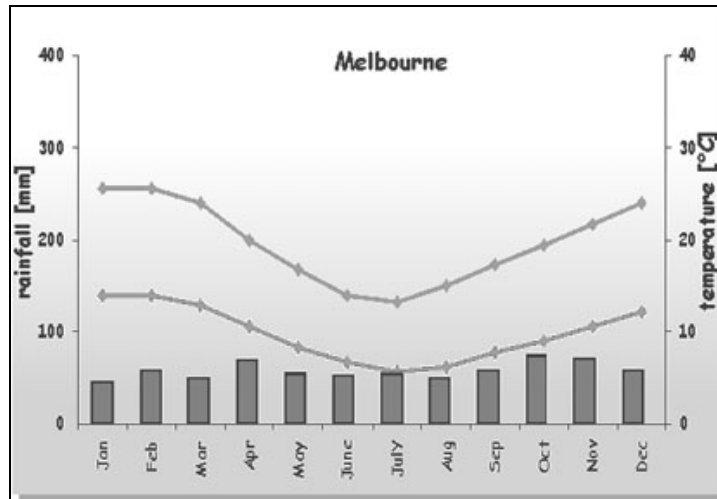
The City has a strong reputation as a culturally vital city. It is Australia's arts capital and has a strong history of cultural expression through the arts, music, film and theatre. There are more than 45 galleries within the municipality as well as a variety of performance spaces. The existing international standard facilities for sports and the arts will be supplemented in anticipation of the 2006 Commonwealth Games. Melbourne has been voted the most livable city in the world three years in a row despite the fact that housing is limited within the downtown.

### **Climate and Natural Environment**

Melbourne is located in the southern hemisphere, so seasons are opposite to those in the Northern Hemisphere. Melbourne has a temperate climate with temperatures only slightly lower than Sydney but with much lower humidity. The climate is unpredictable, especially in the spring, and it is quite common to have four seasons in one day.

Melbourne summers have frequent rain, and the winters are generally sunny with some heat waves during December and January. Temperatures rarely reach freezing during the winter, though it can get quite cold further inland and in the mountain regions

The summer months are generally pleasant.



**Figure 11: Rainfall and temperature diagram**





**Figure 12: Topography of the region**

The City has relatively flat terrain, so its physical character depends largely on its built environment. The area known as Melbourne is founded on land formed ten million years ago by lava flow from a volcano to the west of Melbourne. The volcanic basalt from these lava flows is known in Melbourne as bluestone and still forms the foundation of many of the streets and buildings and adds to the character of the city.

Though the City is highly urbanized, the Yarra River and the large park and garden system contain vegetation and wildlife habitats. Furthermore, Australia has made a commitment to protect their unique indigenous species such as the kangaroo, wombat and koala.

## **Central Business District and the Docklands**

### ***History and Development***

The original settlers in the area known now as Melbourne were aboriginal families and tribes. By the early 1800's, when white people began to arrive in the area, a complex culture and tribal system had developed among the aboriginal people. The arrival of white settlers devastated the aboriginal community and today has almost completely eliminated the aboriginal culture.

The first major attempt at settlement by white settlers was in 1803 when Captain Collins landed convicts at Sullivan's Cove near Portsea. This along with several other attempts at settling the area were unsuccessful until 1835 when entrepreneurs from Tasmania finally had success. John Batman and Johnny Fawker made a treaty with the Aborigines in which they thought they were purchasing the rights to the land and the Aborigines believed they had merely given them the right to pass through the land. Sydney authorities came to investigate the illegal settlement and declared Batman's treaty to be null and void, as in their minds the land belonged to the King of England. One settlement was named after the English Prime Minister, Melbourne. William Lonsdale was sent to oversee their activities in this new town.

From 1835 to 1851 Melbourne was a wild west town with rough living conditions. Governor Bourke brought his military surveyor, Robert Hoddle to the settlement and Hoddle proposed a plan based on Robert Russell's early plan for the settlement. The plan was approved in 1837 and still forms the city center today. The grid lies within a rectangle one mile by half a mile. There were 32 10-acre blocks separated by major streets 99 feet wide with central access lanes of 33 feet. Each block

was 200 meters wide divided into twenty allotments. The rectangular plan was sited according to the topography and natural land circumstances rather than according to the cardinal points. The plan did not take into consideration any existing buildings, and all were torn down for the first public land sale in 1837. The land sold quickly in the first few years, and this combined with the subdivision process and the gold rush led to Melbourne's first land boom in the 1840's and 50's.

Many of the roads were built with the aid of convict labor. The land had poor drainage, and in 1854 streets were curbed and paved. By 1886 the whole length of Collins Street had been paved with Australian hardwood blocks on a concrete base.

Until 1851, Melbourne was the Port Philip Settlement of the Colony of New South Wales. Government decisions about Melbourne were made by people in Sydney, many who had never even been there. As waiting for Sydney's government to make improvements to the city proved to be unproductive, utilities were set up by individuals and groups. Similarly, educational, artistic, health and social services were set up by philanthropists and organizations. In 1851 Queen Victoria declared the area to be a separate colony. Soon after, gold was discovered near Ballarat, and the colony was transformed into a boom town with a rapidly growing population.

The area known as the docklands was developed in the 1880's out of an unusable piece of land known as the West Melbourne Swamp in response to the strong need for better navigation into Melbourne for the movement of freight. Until the 1880's, ships coming into Melbourne anchored in Hobson's Bay, unloaded their cargo into lighters that would bring freight into Melbourne along the Yarra River. The cargo was often damaged because of the frequent loading and unloading. The goldrush period after the 1850's

changed Melbourne from a rural port to a booming city, so the time involved in double handling the cargo became even more of an issue.

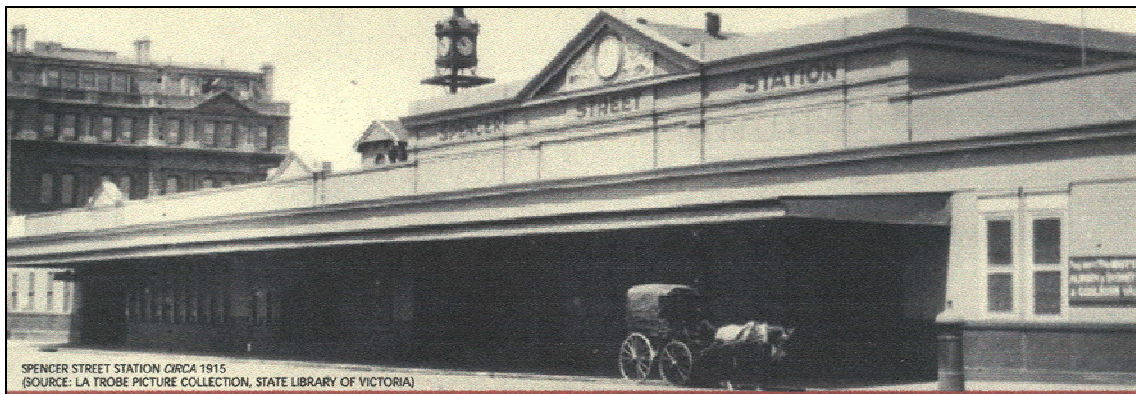
In 1876, an act was passed through the Colonial Victorian Legislative Assembly to establish a Harbor Trust. The Trust decided to hire an engineer to re-channel the Yarra, making it more navigable and shorter and to plan a new harbor near the warehouses of Melbourne's commercial center near Spencer Street Station. Sir John Coode, an English engineer, was hired for a fee of 5000 pounds to advise on this goal.

Plans were in existence to dig a channel from Port Melbourne to Melbourne, but Coode felt that a channel of this kind would need constant dredging and widening, and would cost too much over time to maintain. He proposed to change the course of the river, making it a mile shorter and much wider. He also proposed the new docks on the swamplands to the west of Melbourne. The river was completed in 1886, and work on the docks was begun in 1889. The creation of the docks involved the excavation of 2,308,247 cubic yards of soil. This was used to raise and improve the land surrounding the docks.

The Victoria Docks continued to be vital to the development of Melbourne. Their proximity to freight trains allowed cargo to be moved easily into other areas of the state and country. In the 1960's cargo began to be moved in large containers requiring much more open space for storage than the cargo sheds lining the docks provided. In 1975 the Charles Grimes Bridge between the railway yards and the Dock closed the wharves east of the area, and the opening of Bolte Bridge meant ships could no longer enter the Victoria Dock area.

The area to the west of Spencer Street was known as Batman's Hill and was originally a cricket ground and a race course. In 1856, the Victorian Railways Department convinced the City Council, whose members wished to make the area a public park, to allow the land to be used as a railway station.

Batman's Hill was leveled to make way for the station that was built in 1857 and was essential to the development of the state and the city. The station handled passenger as well as freight services from 1859 onward. Australian troops left for war from the station, and farmers used the train to sell wool and produce in Melbourne.



**Figure 13: View of the exterior of Spencer Street Station circa 1915**



**Figure 14: Photo Montage of interior aspects of the original station**



**Figure 15: View of the original station from Spencer Street**

Industrial uses grew to the west of the Station largely because of the proximity of the shipping trade at the docklands. The industrial development adjacent to the site included tanning, curing, wool-washing, bone-grinding, and soap and candle manufacturing. This pushed the residential development of the city to the eastern portions of the city. This trend can be seen even today in the uses surrounding Spencer Street Station.

By 1860, the station was determined to be inadequate and unsuitable as a passenger terminal. Plans to improve the building were made, but costs deferred them several times over the next 20 years. The Railway Administrative Building at the corner of Spencer and Flinders Street was completed in 1893. It was the largest office building in Melbourne at the time. The planned improvements were never made with the exception of the building of suburban platforms and a subway to replace a wooden footbridge in the 1920's.

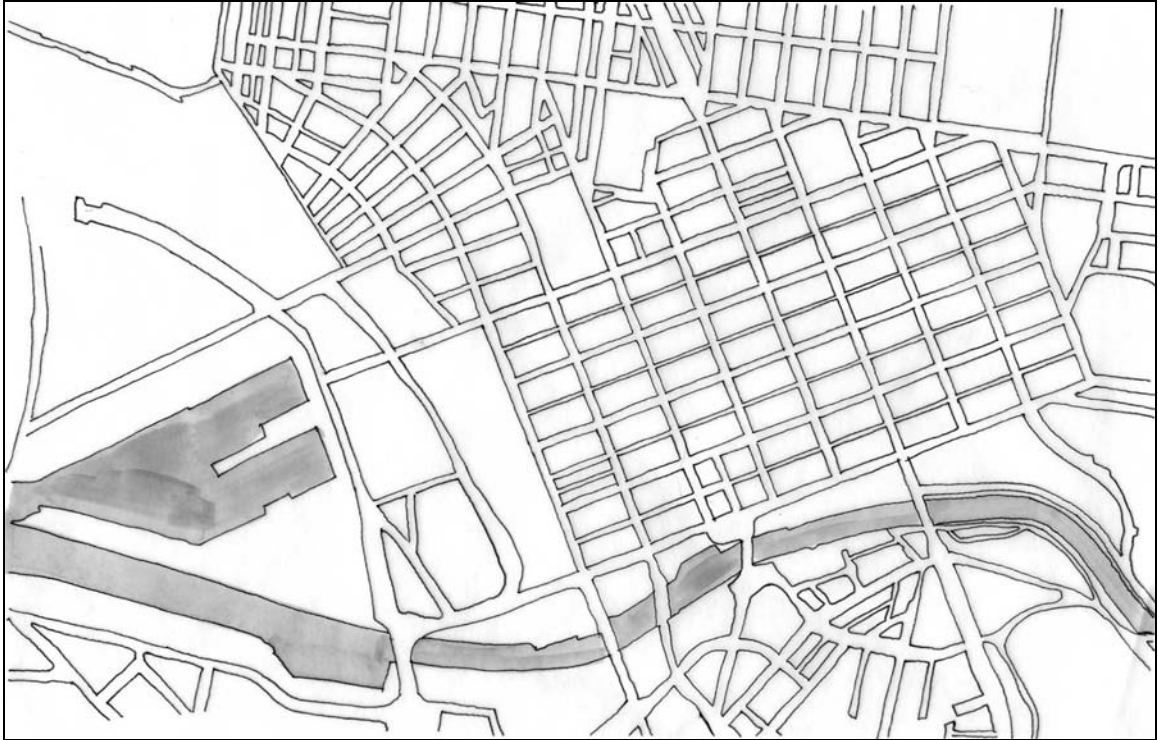


**Figure 16: View of the Railway Administrative Building**

In the 1960's the construction of the standard gauge track to Albury made necessary the execution of plans to rebuild the station. In 1963 the existing station was opened with a new interstate platform and a new terminal building. The station has had little or no improvements made since that time. The existing station has no comfortable waiting or meeting spaces and no civic open spaces. The platforms are exposed to the elements, and the subway connections to platforms have low ceilings and steep slopes, making them dark and uncomfortable.

### ***Existing Conditions***

The identity of the City is marked by the Hoddle Grid, which is original to the nineteenth century City subdivision pattern, and by major boulevards, historic buildings and streetscapes, the Yarra River, parks and gardens, cultural activity centers, highly accessible commercial districts, and attractive residential areas. The urban form is characterized by diverse local places and spaces, each with a distinct character.



**Figure 17: Organization of downtown Melbourne** Diagram shows the Hoddle Grid and its relationship to the surrounding areas

The primary civic spaces are located along the banks of the Yarra River. High-rise buildings are clustered on the hills to the east and west, while the Swanston Street valley is relatively low in scale, dominated by traditional streetscapes, retail outlets and high pedestrian activity. Established parks and botanic gardens surround the grid.

The edges of the Hoddle grid are defined by some of Melbourne's major civic buildings. To the North, the Old City Courts and the new Commonwealth Law Courts are located along Russell and LaTrobe Streets, while to the East, Parliament House and the Treasury Building terminate Bourke and Collins Streets. To the South, Flinders Street Station defines both Swanston and Elizabeth Streets, while Federation Square closes the southern end of Russell Street. To the west the Grand Central Hotel (formerly the Victorian Railways Administration) marks the edge of the grid. Spencer Street



Station should have been the key western civic building defining the grid on the western edge of the city. This is extremely important with regard to its new role in marking the transition between the grid of the CBD and the different urban form of the undeveloped Docklands area.

The Docklands area was relatively unexplored territory until the opening of Colonial Stadium in March of 2000. Colonial Stadium is Docklands' first major development. It is a \$460 million, high-tech, multi-purpose sports and entertainment venue. The vast area of the Docklands is currently covered with disused piers, sheds and construction works. The Docklands covers 200 hectares of land and water, and the eight precincts will ultimately become a diverse neighborhood of entertainment, waterfront restaurants and shops, residential, technology, and business uses.



**Figure 18: Aerial view of existing Docklands area**



**Figure 19: View of Telstra Stadium and undeveloped adjacent site**



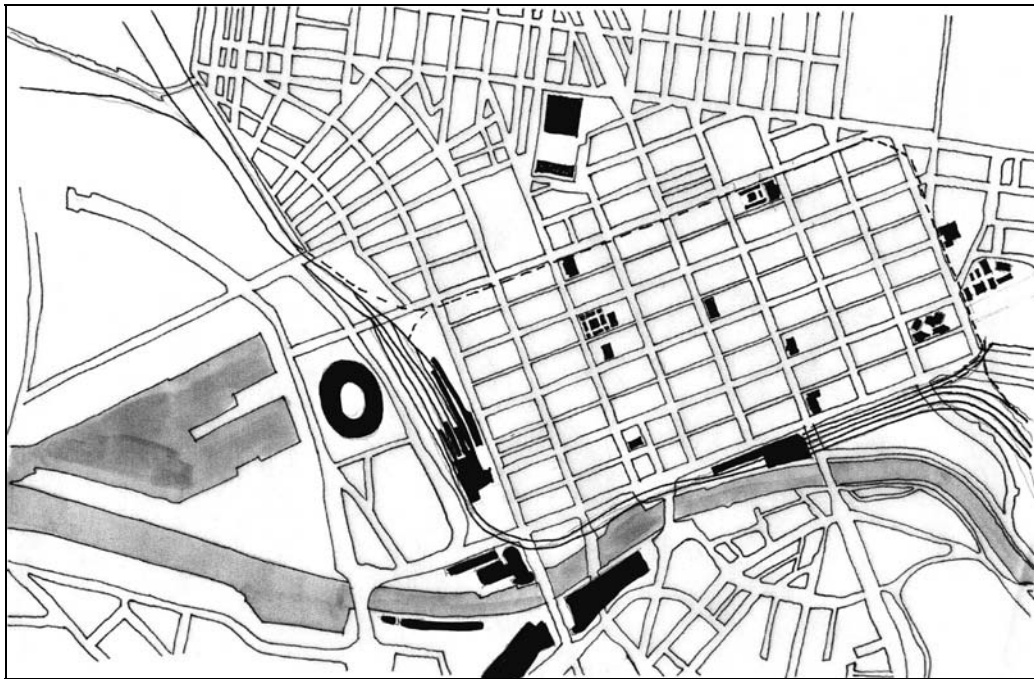
**Figure 20: Aerial view of Telstra Stadium and Spencer Street Station site**



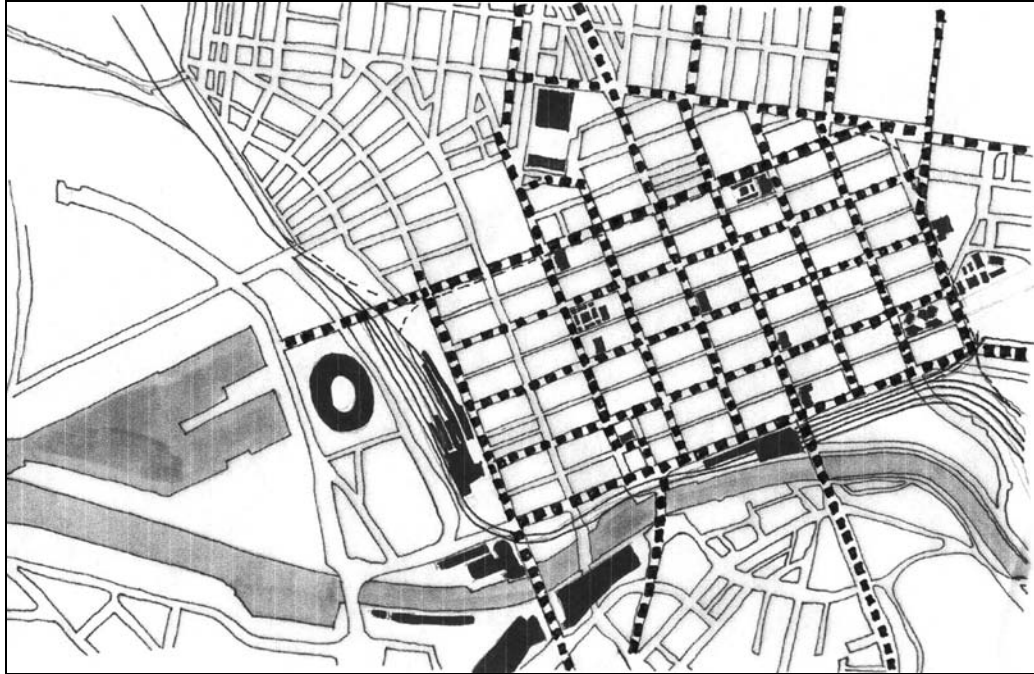
**Figure 21: Figure/Ground** The density levels are high to the North of the city, but development along the water and particularly along the docks is relatively low. The Spencer Street Station Site mediates between the existing city and the docklands.



**Figure 22: Street Network**



**Figure 23: Public Buildings and Train Lines** Diagram shows that the Hoddle grid is bounded on all sides by major public buildings marking the transition to the colliding grids. Train lines circle the city both above and below ground.



**Figure 24: Tram Lines** Trams exist throughout the city and carry passengers to the suburbs. Trams are a primary form of transportation throughout metropolitan Melbourne.

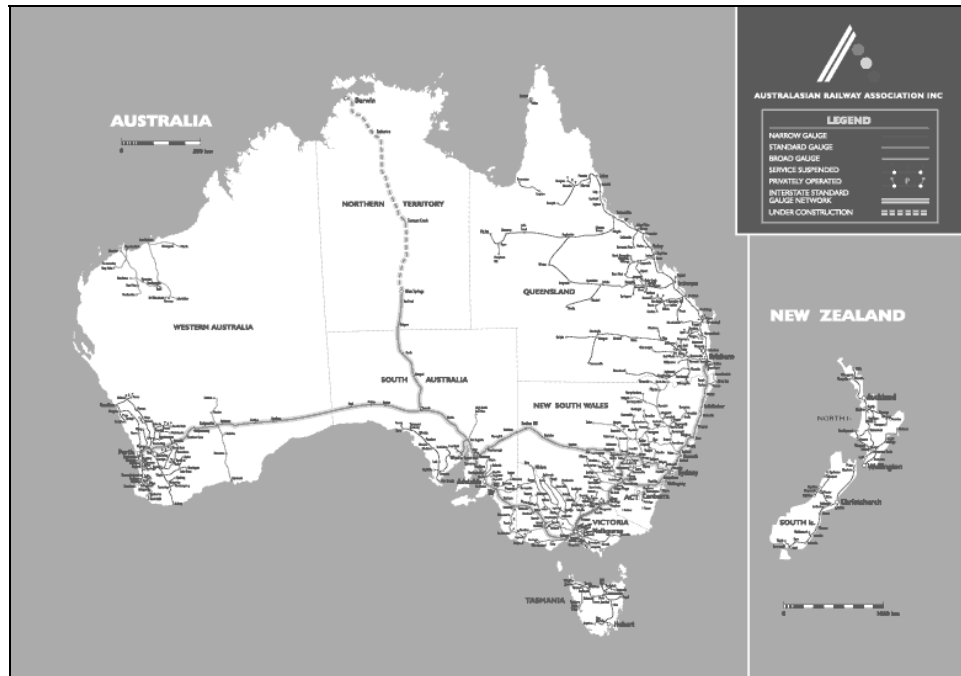


Figure 25: Rail Lines Throughout Australia

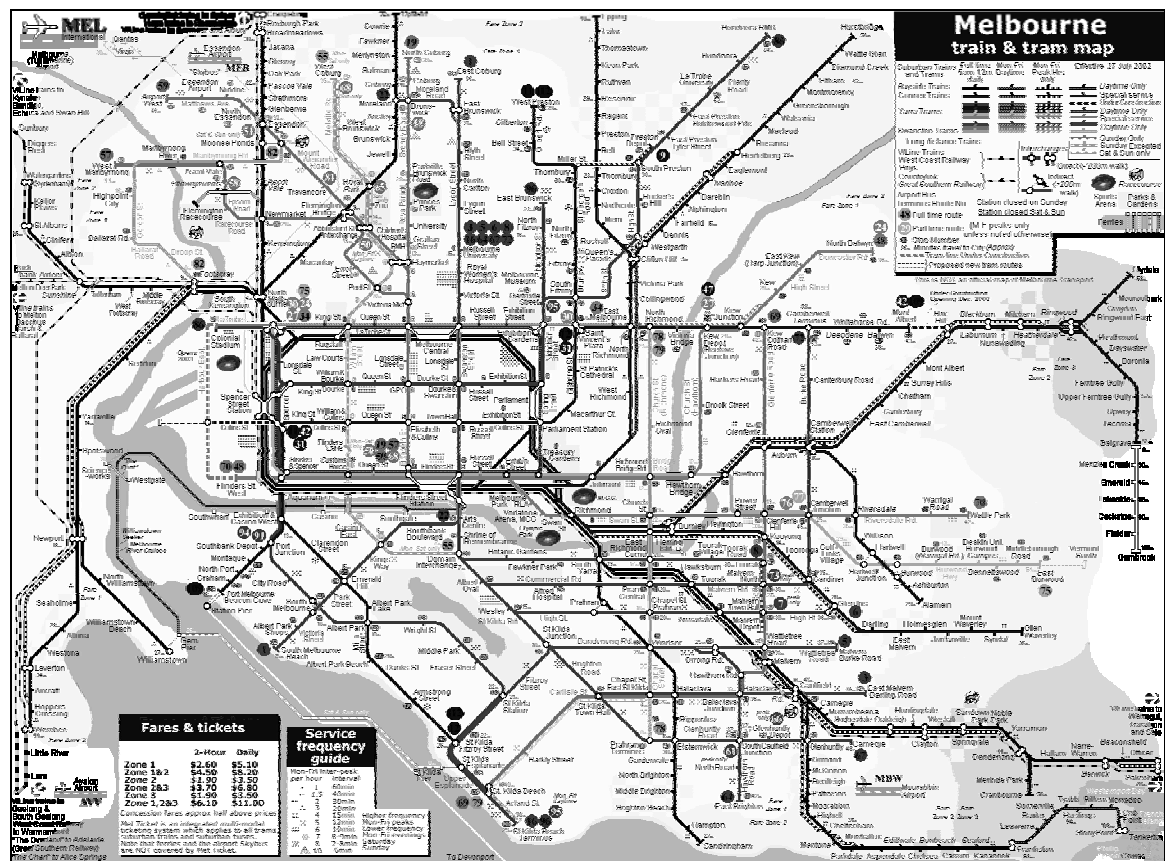
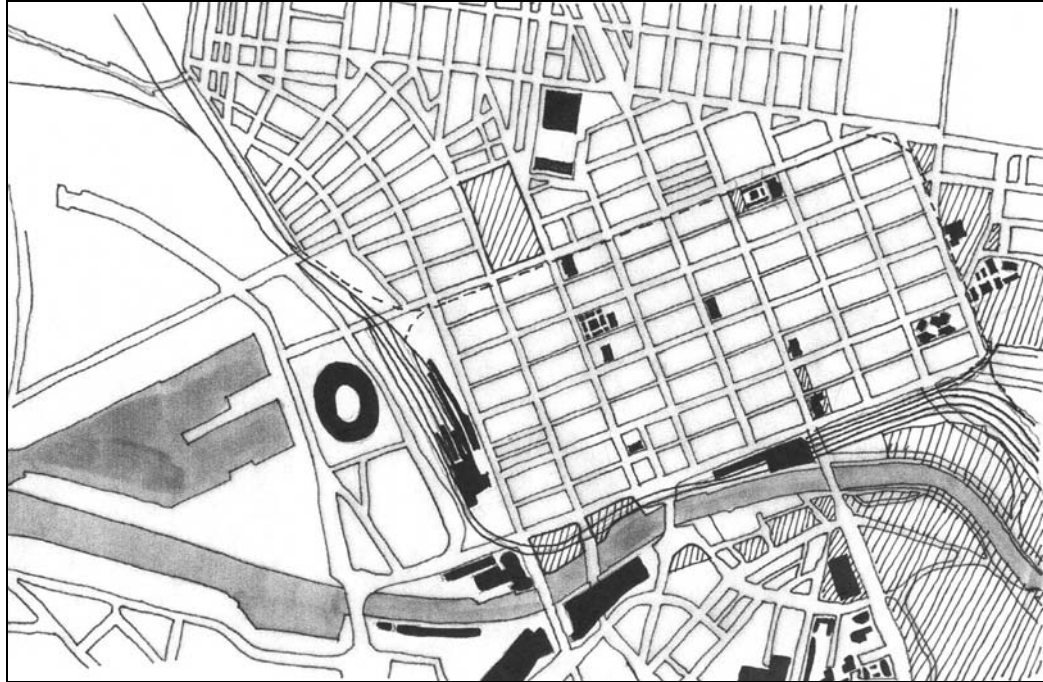
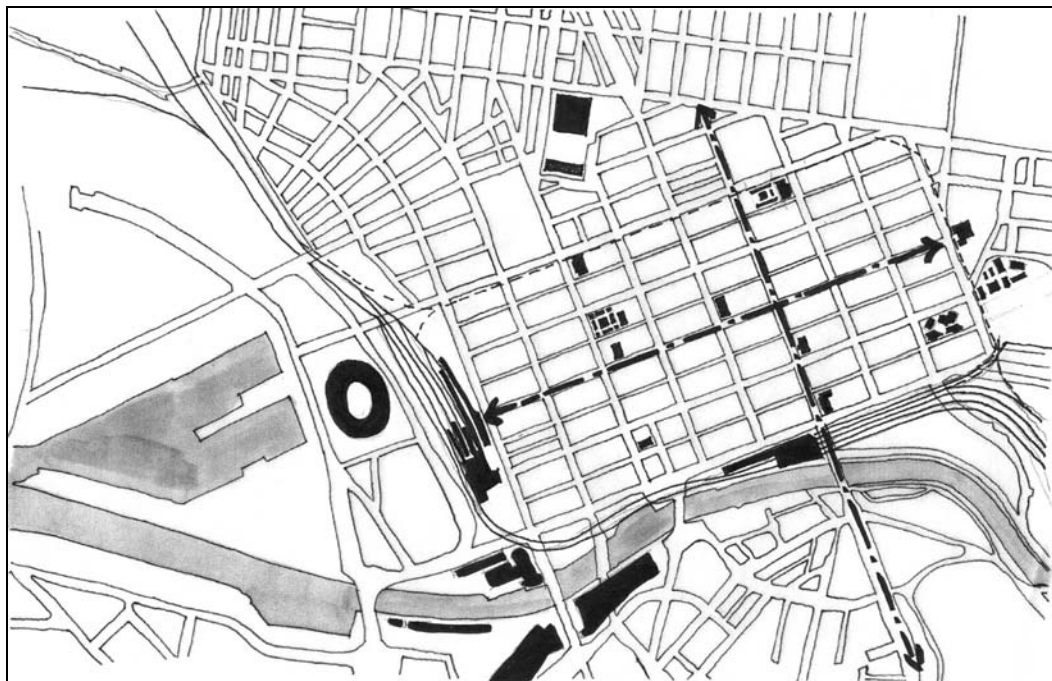


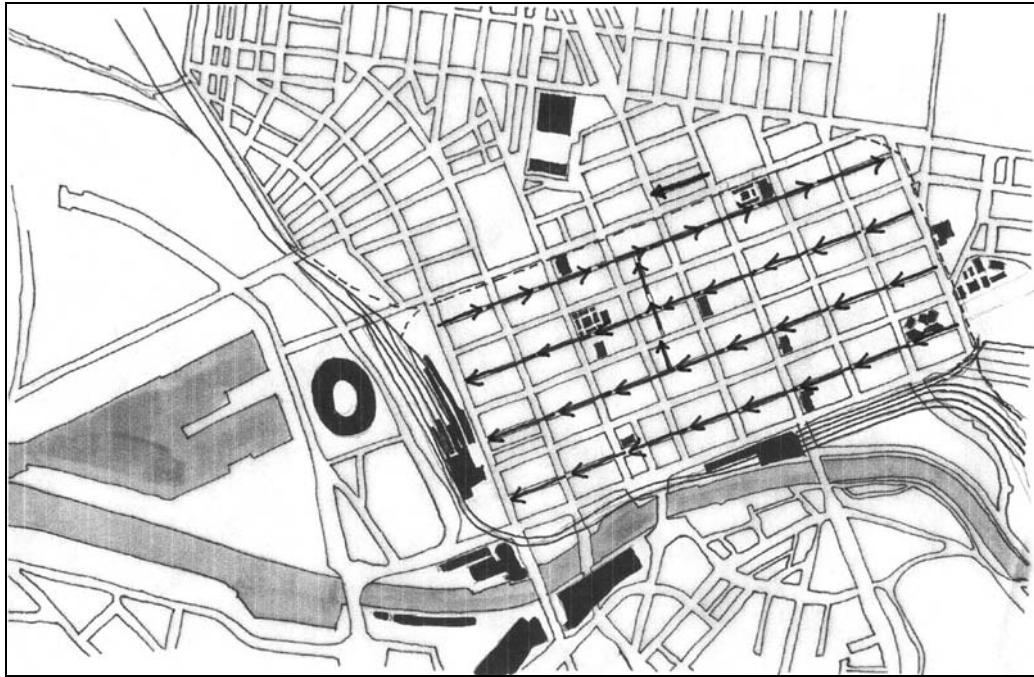
Figure 26: Melbourne Rail and Tram Map



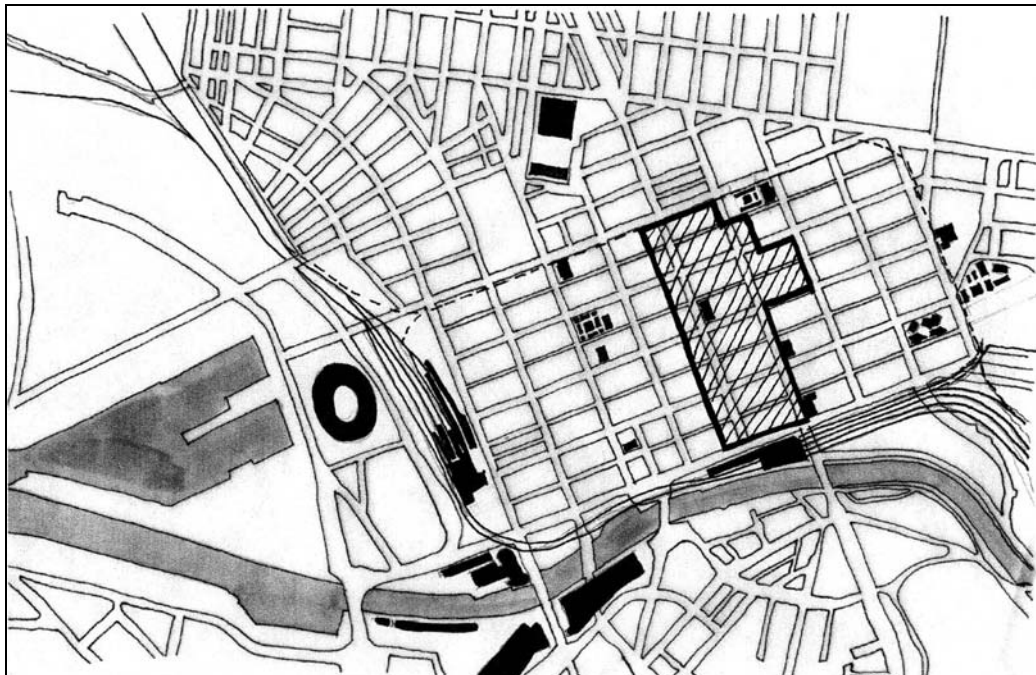
**Figure 27: Green Space** The Southern and Eastern portions of the city are composed of an extensive park system. This area is also the arts district with major museums and the arts college located at the edge of the park. Public spaces are limited within the city boundaries



**Figure 28: Major Views** Diagram shows primary axis of the city. The North-South axis connects the center of the city to the park system and the Shrine of Remembrance located therein. The East-West axis connects the Parliament to Spencer Street Station.

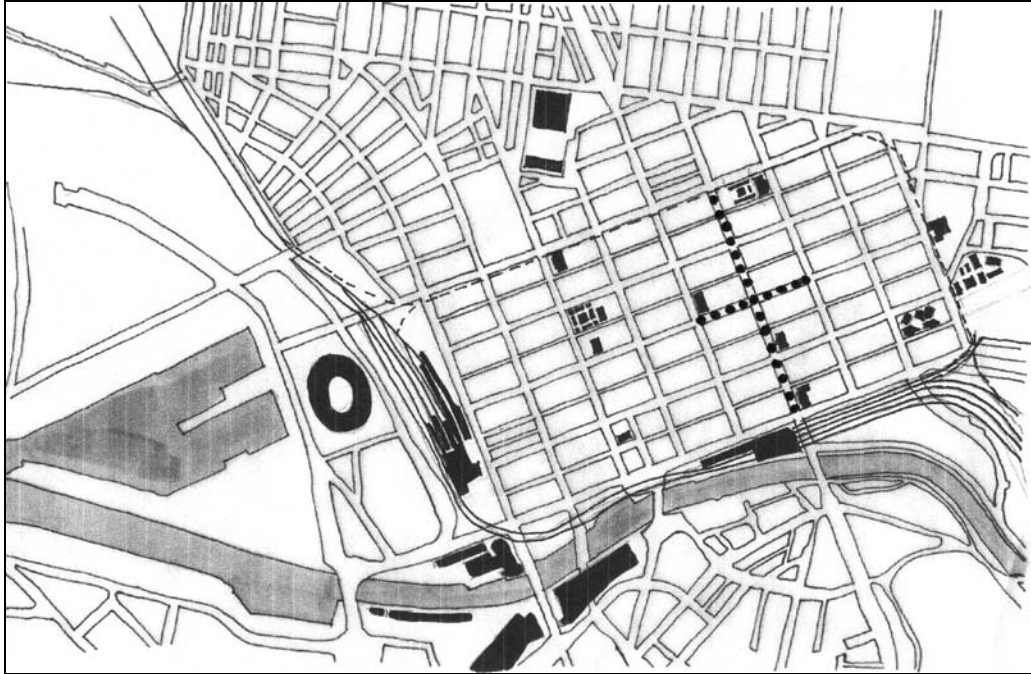


**Figure 29: Street Direction** The Major streets within the grid are two-direction, while the service roads at the center of the blocks are one-way.

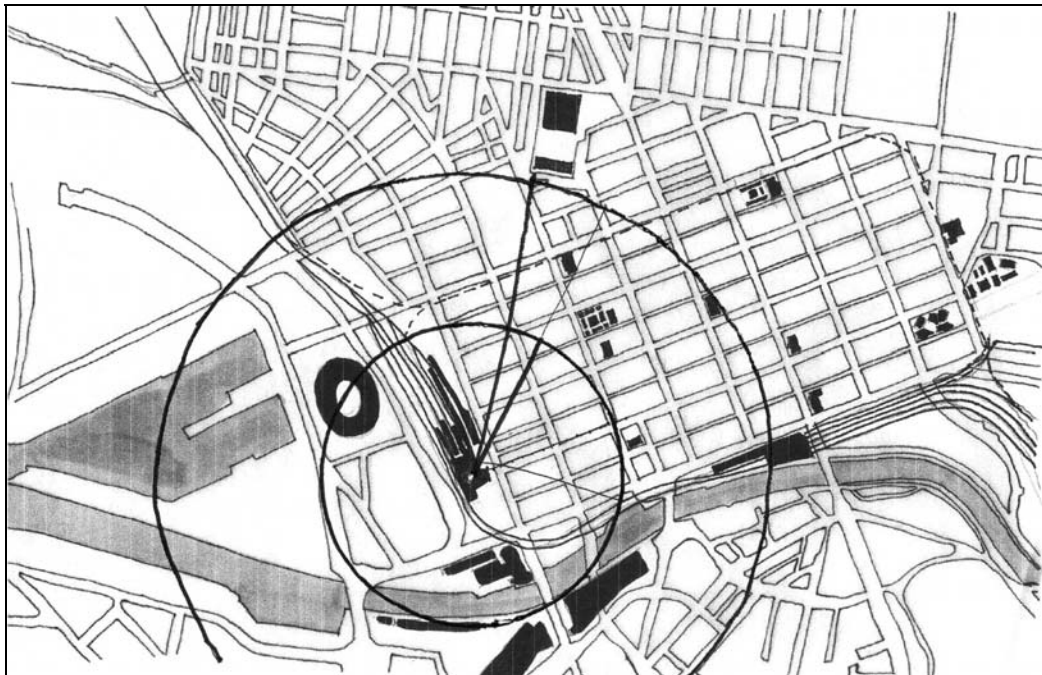


**Figure 30: Retail Core** The primary retail activities of the city are located at the intersection of Bourke Street and Swanston Streets and the surrounding areas.





**Figure 31: Pedestrian Streets** A pedestrian mall is located at the heart of the retail core of the city. This diagram will eventually show major pedestrian movement through the city and docklands.



**Figure 32: 5 and 10 Minute Walk** Diagram shows the walkability of the city. The retail core of the city is located within



### *Planning Studies*

The City of Melbourne has gone through an extensive planning process to establish the master plan for both the docklands area as well as to improve conditions within the city. Their primary concern is to make a strong connection between the existing city and the docklands.

The following images represent the projected image of the Western portion of Melbourne in the year 2020.



**Figure 33: Proposed Vision of Docklands in 2020**



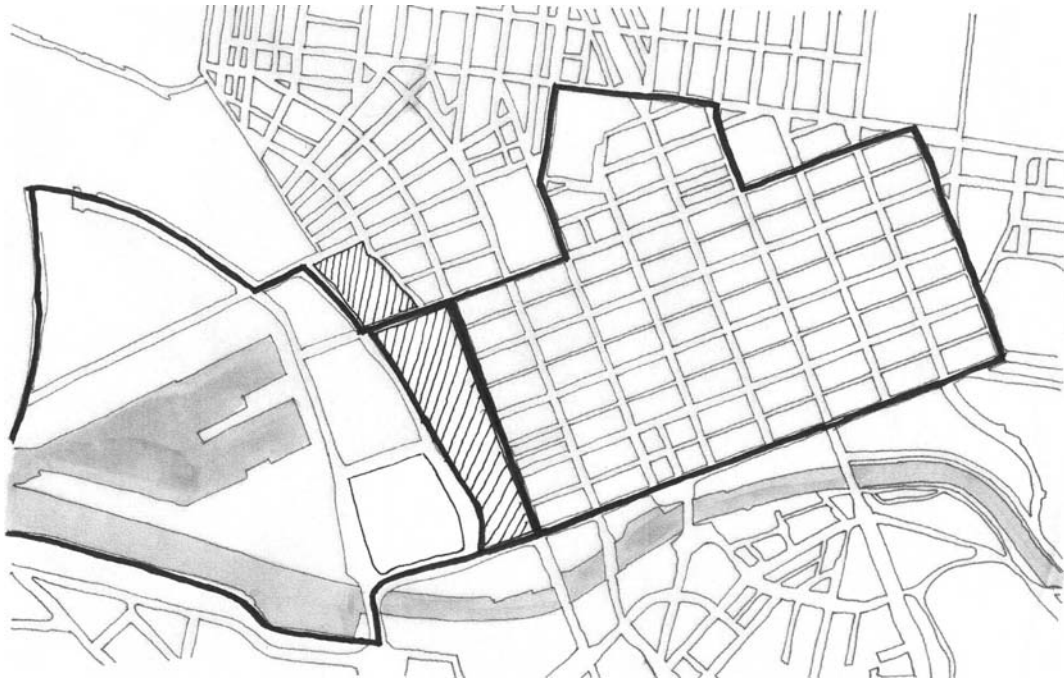
**Figure 34: Proposed Vision of Docklands in 2020**



**Figure 35: Proposed Plan of Docklands in 2020**

### *Spencer Street Station Site Conditions*

The Spencer Street Station redevelopment project is located at the Eastern edge of the Central Business District. The existing station will be demolished and rebuilt to occupy the same site with a more imageable and accomodating building for interstate and suburban rail travel. The site is pivotal as a gateway between the existing city and the developing docklands area as it marks the transition between the two zones and their unique urban qualities.



**Figure 36: Site Boundaries** Image shows the location of the thesis site in relation to the Central Business District and the Docklands areas

The Neighborhood surrounding Spencer Street Station along the Central Business District side houses primarily commercial uses. There are some less inviting pubs and cafes. The area appears worn and tired, no doubt because of the unattractive nature of the existing Spencer Street Station which occupies several large blocks along the western side of Spencer Street. Retail activities are confined more to the city center, so there is

little to activate the street. Medium priced hotels have been built and refurbished in the area, and there is evidence of some increase in residence within the area, a small grocery shop across from the station and a very nice restaurant. It is possible that these businesses are supported primarily by daytime business traffic, but there are a great number of high-rise apartments planned for this area of town.



**Figure 37: Views of The Existing Spencer Street Station**



**Figure 38: Interior of Existing Station** Images show the character of the interior as well as the historic mural that will be saved and used in the new building.



**Figure 39: View From Site Toward Collins Street**



**Figure 40: View From Site Down Bourke Street**



**Figure 41: View of Pedestrian Bridge** A pedestrian bridge has been built adjacent to the site connecting Spencer Street to Colonial Stadium and the docklands

North of the station along Spencer Street is the Melbourne Assessment Prison, The William Angless Institute of TAFE for hospitality and food studies, and The Age Newspaper Building, and the Melbourne City Mail Center which mark the intersection of Spencer and LaTrobe Streets. In addition, just north of LaTrobe Street there are a few apartment buildings which mark the transition into the largely residential neighborhood of West Melbourne. Along this corridor there is also the CitiPower Station - for electricity, a self storage company, Tower Life, Lonsdale Court Office Suites, and a large

Australia Post Office. Most of these buildings are 8-10 stories, with a few dominating buildings within a block of Spencer Street.



**Figure 42: View From Pedestrian Bridge of Train Tracks and Rear of Station**

King Street, one block over from Spencer Street, has a reputation for being slightly rougher and grittier than the rest of the city. The existence of the Law Courts and many barrister's offices located along William Street has perhaps created a barrier between the heart of the city and the Western side of the CBD preventing the character of those spaces to continue through to this part of the city. Consequently, there are a large number of night clubs, many of them strip clubs and the like, located along King Street furthering the divide between the central city and the western end.

On the Eastern Side of the site is the newly constructed and vast Colonial Stadium and surrounding parking lots. Beyond that and to the North and South is the vastly undeveloped Docklands area that surrounds Victoria Harbour.



**Figure 43: Views of Colonial Stadium from Pedestrian Bridge**

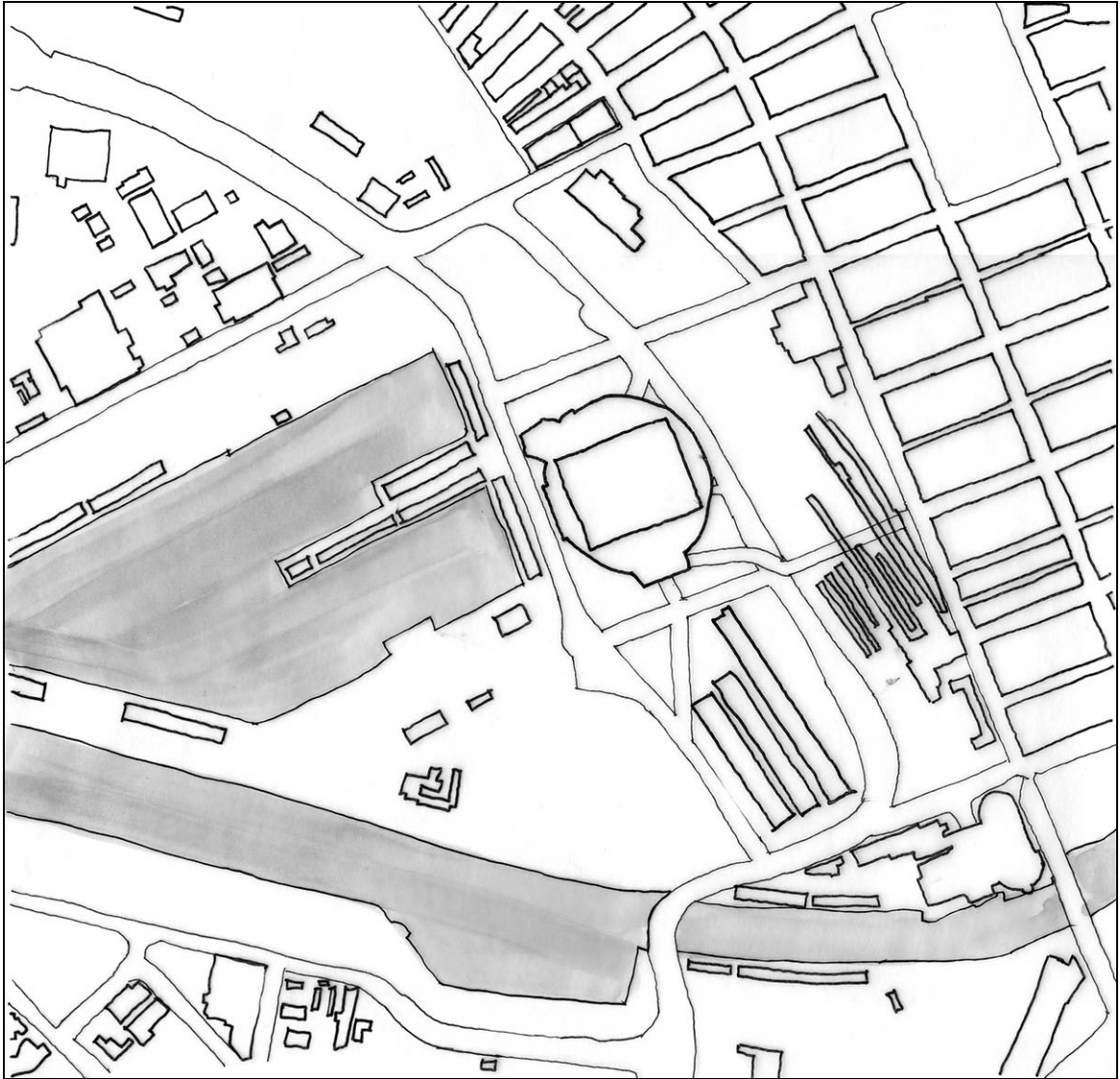
Train tracks occupy the site immediately to the North and South, but on the South, along the Yarra River, there are important civic spaces. Along with a Police Center, there is also the Melbourne Convention Center and the World Trade Center that occupy a public wharf space. Directly across the river is the tremendous Crown Entertainment Complex and its associated buildings.



**Figure 44: View of Platforms and Tracks**

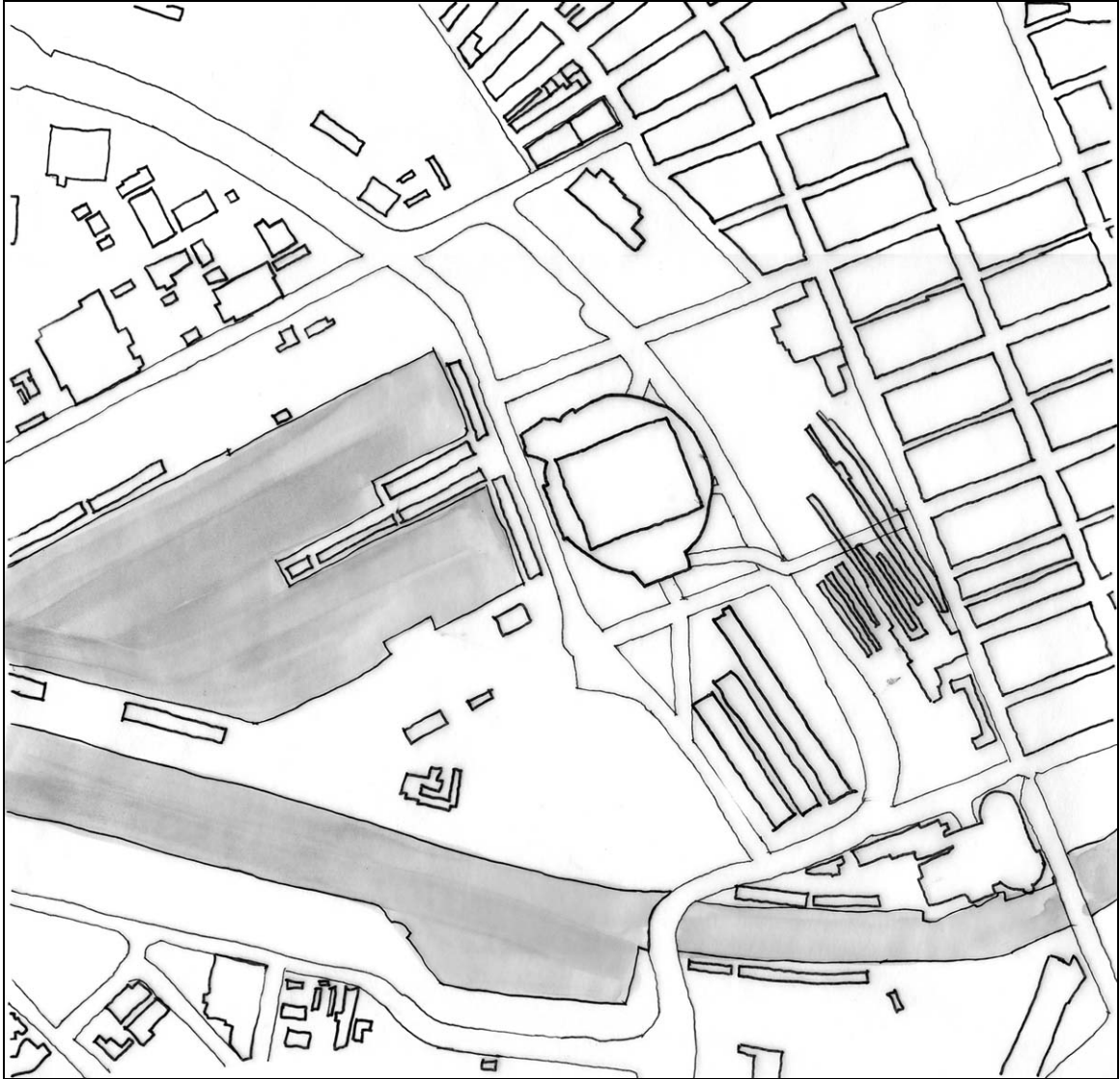


## Site Analysis



**Figure 45: Land Use** Diagram shows land use surrounding the station precinct.





**Figure 46: Major Views** Diagram demonstrates the major views to and from site.

**PROGRAM**

Train stations have a long history as a building type. The programmatic requirements are determined by the location and size of the site and the importance of the station. Often the station acts as a landmark and as a public monument. Because of the historic importance of stations, they have an immediately recognizable typology.

Basic programmatic elements are present in all stations, though they are not necessarily arranged or sized according to a typological formula. Stations are made up of four major spaces – a public plaza, the main hall, the platforms, and the service area. Each of these spaces plays an important role in the overall function of the station. As the station acts as an entry and departure point to and from the city, it should orient the user toward his eventual destination.

The public plaza links the station to the activity of the street. It identifies the station as a monument and serves to orient the user to the city. It should allow the user to move quickly toward other means of transportation. It should be treated like a major public space in the urban fabric, giving a true imageability to the city upon entry. The plaza should also act as a place of repose and should act as a gathering and waiting location for users.

While the plaza acts as the interface between the station and the city, the main hall is a transition space between the exterior condition and the interior, and it should serve to orient people to their destinations. The main hall is generally the most architecturally ambitious space and is the main location for visitors and passengers to congregate. It is typically a large, open space which houses waiting and baggage areas, information points, ticket and booking desks, and often, retail shops and restaurants. As its main function is one of orientation, the circulation from one point to another is extremely

important. Lastly, the hall should provide a distinct image to the experience of travel, as is the place in the building the traveler associates with the idea of arrival.

The platforms and train shed is where passengers board and alight from trains, and though it is a primarily functional space, its image is no less important than that of the main hall. Its relationship to the station is as important as the station's relationship to the city since it is the first space one encounters upon arrival and the last space upon departure. Functionally, the platform area is a long linear element by its very nature. Its size and configuration is determined by the existing train lines and city codes.

These elements will be configured to take maximum advantage of the site and to connect the two distinct areas of the city. The unique location of the station between the docklands and the CBD places great pressure on the exterior space and the main hall, they must not only serve as transition spaces between the station and the city, but also as connectors between the two distinct parts of the city.

## Building Program

|                              |                |                  |
|------------------------------|----------------|------------------|
| Exterior Space               |                | As Necessary     |
| Transfer Areas for Cab, Tram |                | As Necessary     |
| Main Hall                    |                | 15,000-25,000 sf |
| Public Display Space         |                | 3000 sf          |
| Retail Stores x10            | 500-1000 sf/ea | 5000-10,000 sf   |
| Restaurant                   |                | 7300 sf total    |
| Prep Area                    | 300 sf         |                  |
| Dining                       | 3000 sf        |                  |
| Bar                          | 1000 sf        |                  |
| Kitchen                      | 1500 sf        |                  |
| Storage x2                   | 550 sf/ea.     |                  |
| Restrooms x2                 | 200 sf/ea      |                  |
| Ticket Sales                 |                | 3350 sf total    |
| Counter                      | 750 sf         |                  |
| Supervisor's Office          | 200 sf         |                  |
| Clerical                     | 1500 sf        |                  |
| Accounting                   | 400 sf         |                  |
| Safe Room                    | 100 sf         |                  |
| Restrooms x2                 | 200 sf/ea      |                  |
| Station Operations           |                | 550 sf total     |
| Manager's Office             | 400 sf         |                  |
| Clerk                        | 150 sf         |                  |
| Employee Lounge              |                | 600-800 sf total |
| Service                      |                |                  |
| Janitorial                   | 300 sf         |                  |
| Loading Dock                 | 500 sf         |                  |
| Receiving Area               | 250 sf         |                  |
| Storage                      | 500 sf         |                  |
| Public Restrooms x2          | 550 sf/ea      | 1100 sf total    |
| Circulation (20%)            |                | 8220 sf          |
| Mechanical                   |                | 20,000 sf        |
| Boiler/Chiller               |                |                  |

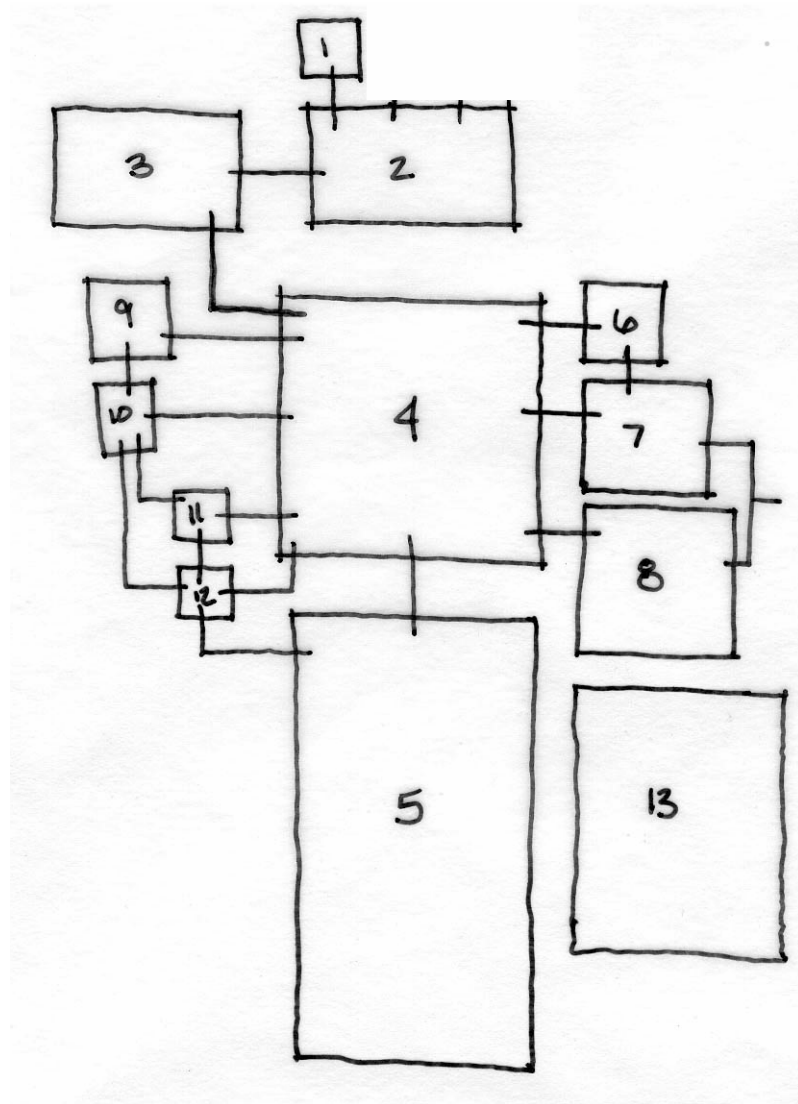
Cooling Tower  
Air Handler

Platforms

To Be Determined Upon Site Visit

TOTAL

Approximately 70,000 sf



**Figure 47: Topological Diagram** 1. Transfer Area; 2. Exterior Space; 3. Parking; 4. Main Hall; 5. Train Shed/Platforms; 6. Public Display Space; 7. Restaurant; 8. Retail; 9. Ticket Office; 10. Employee Lounge; 11. Station Operation; 12. Service; 13. Mechanical

**DESIGN CONSIDERATIONS  
AND PRELIMINARY APPROACH**

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There are a number of design considerations that I have investigated as necessary interventions in the area surrounding Spencer Street Station. First, and perhaps most importantly, is the circulation of the passenger. The station should provide a clear entry to the city and has a responsibility to provide a clear understanding of the relationship between the station and transit options and the city. Given the station's placement at the edge of the Hoddle Grid of the CBD, it must provide a clear edge along Spencer Street. Furthermore, as it will become the central station in Melbourne for most non-suburban passengers it must act as a connector across 600 feet of train yards between the CBD and the Docklands. Preserving views of the CBD and Docklands will aid in providing this connection.

A primary consideration is the necessary level change across the tracks. The station serves both country and interstate passengers as well as suburban travelers and commuters. The tracks serving the former of these are "end station", while the latter are "through station" tracks. As all of the platforms are located at the level of Spencer Street, one must move vertically in order access the platforms on the "through station" or suburban tracks. Achieving this level change appears to be a challenge and there will certainly have to be a design intervention to achieve this. In light of this, I have considered a variety of options that I will cover later in this section

Given the walkability of Melbourne the pedestrian experience plays an important role in the design of the station. The pedestrian bridge (Bourke Street Bridge) that connects the CBD and the Docklands via the Telstra Dome is already constructed, so consideration of the relationship between the station and the experience of moving along that bridge is extremely important. There also need to be clear connections between the



station and trams, as the use of the street car is the main form of transportation for most Melbournians.

The area surrounding the station is seedier than other parts of the CBD, largely I think because of the rather unfortunate station that is to be redeveloped. I wish to provide retail and eating facilities to both provide additional reasons for people to come and enjoy both the station and the surrounding area. This hopefully will revitalize the area and encourage mixed use and air rights development of the surrounding area.

As the connection across the tracks and between the two parts of the city is so very important, I have considered a number of possible interventions that will strengthen this connection as well as achieve the many other responsibilities of the station. I have considered the following parti options for my design. First, there is the opportunity to make the level change between Spencer Street and the Bourke Street Bridge Levels a true experience for the pedestrian and traveler. Possibilities include a Federation Square intervention that allows for a broad open space that moves vertically gradually over the breadth of the train yards. As the public open space associated with as station has an importance in providing a clear meeting place as well as orienting passengers to the city. Given this consideration, using a large open space to connect the two levels seems an appropriate intervention. I have also considered placing the main station bounding the edges of the Bourke Street Bridge rather than upon the original site. This would allow for development along the Collins Street extension as well as connecting the true center of the CBD directly to the docklands. Another parti that is under consideration is that of an overarching roof above the whole of the station and tracks, but I would like to treat the two different functions of the station as separate entities. That brings me to my final parti

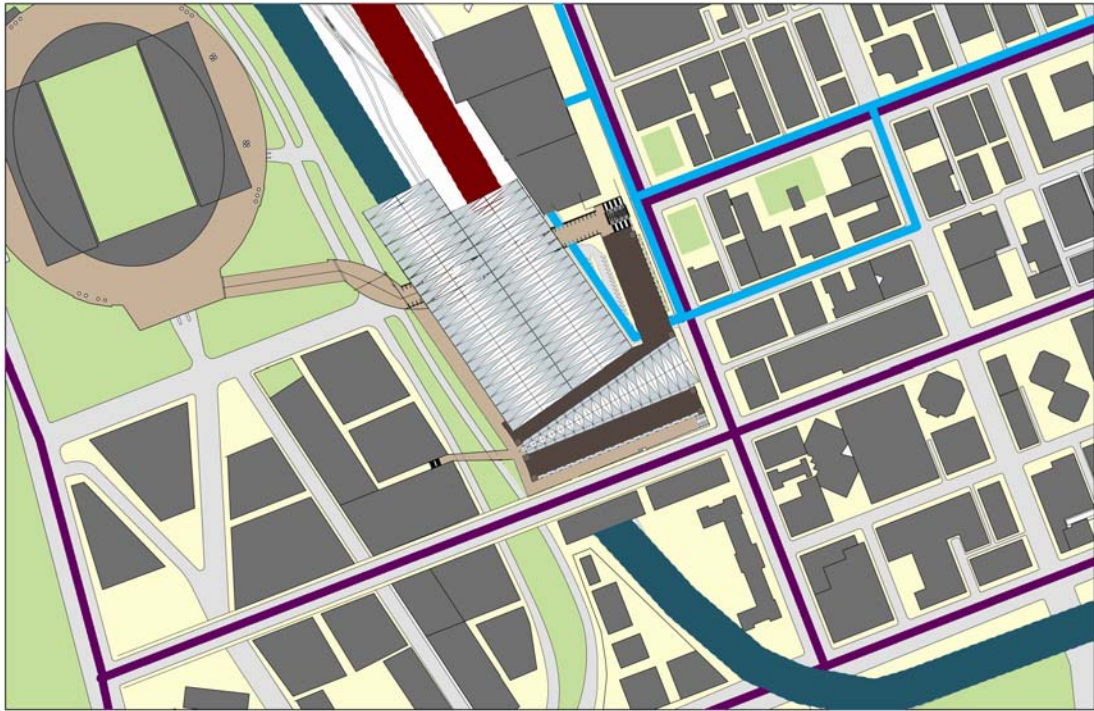
option in which a traditional “head building” wraps the Collins Street and Spencer Street edges, while the two aspects of the trains would be housed in two separate train sheds.

The city of Melbourne has many arcades and passages within the large city blocks, so I have considered incorporating the idea of an arcade to provide the connection across the train yard. Furthermore the relationship between past and future is of the utmost importance to me in the design of the project. While there are certainly modern buildings in the CBD, it is made up of traditional buildings, often of Australian Bluestone, and especially in the area surrounding the station on the CBD side. I would like to incorporate a vocabulary of design that honors the tradition of the city while providing a connection between that past and the future of the docklands development.

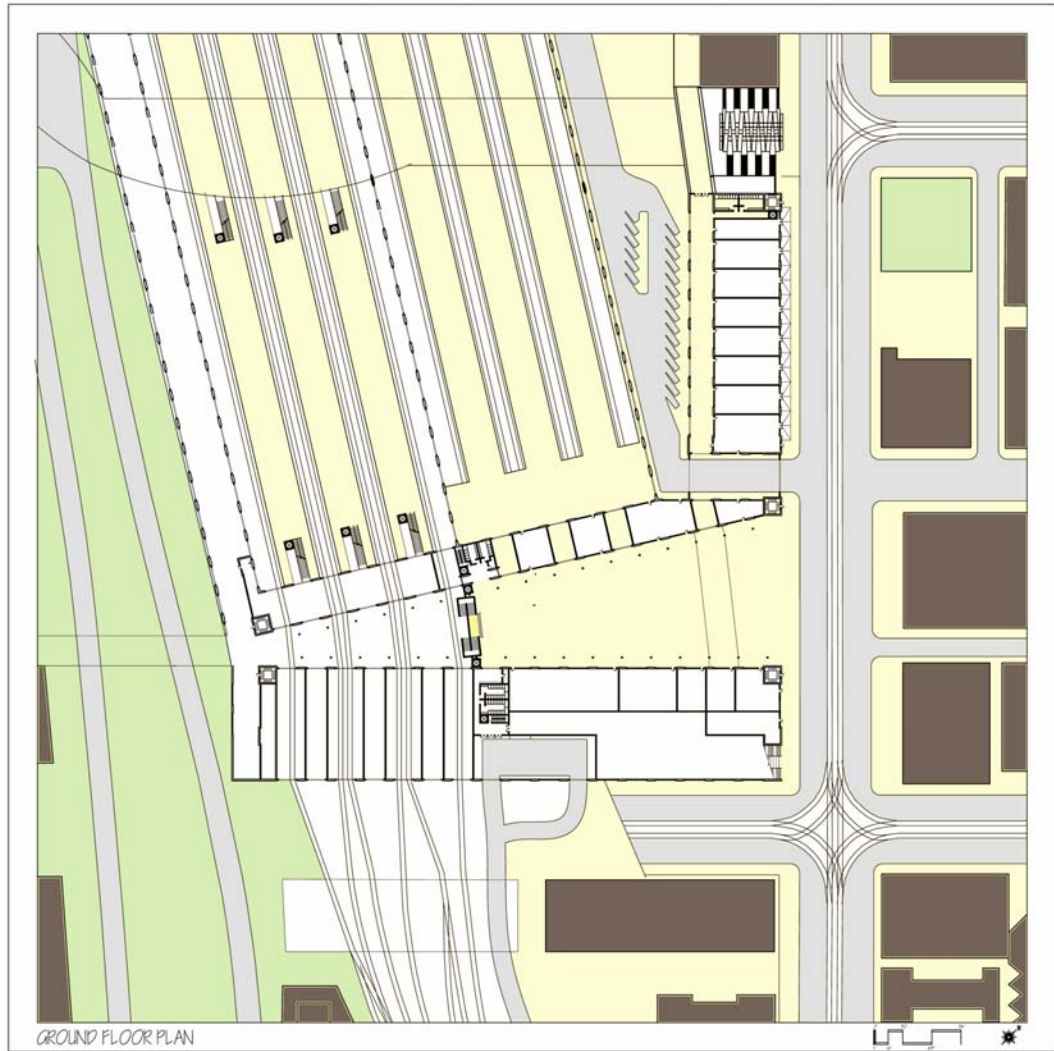




**Figure 48 - City-wide Site Plan**

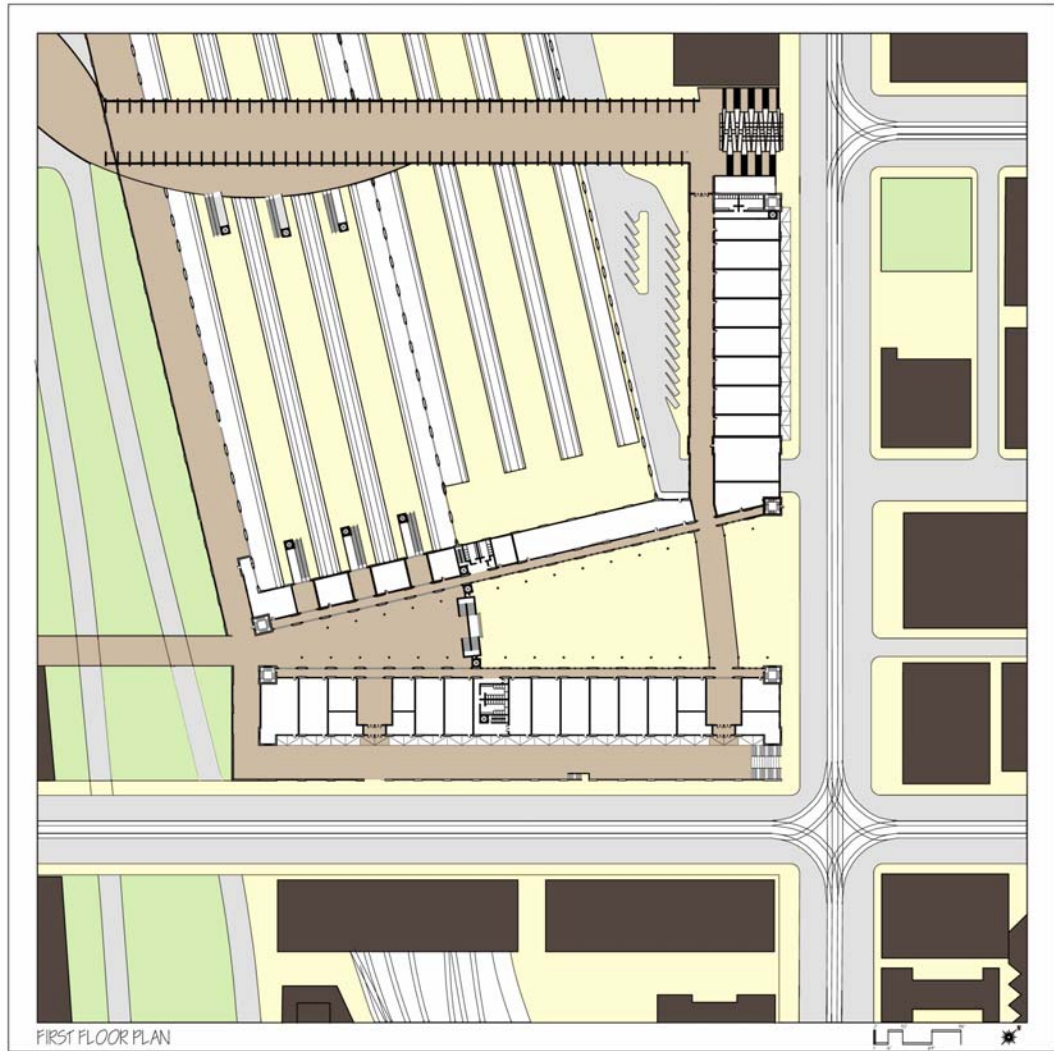


**Figure 49 - Local Site Plan and Transportation Diagram**

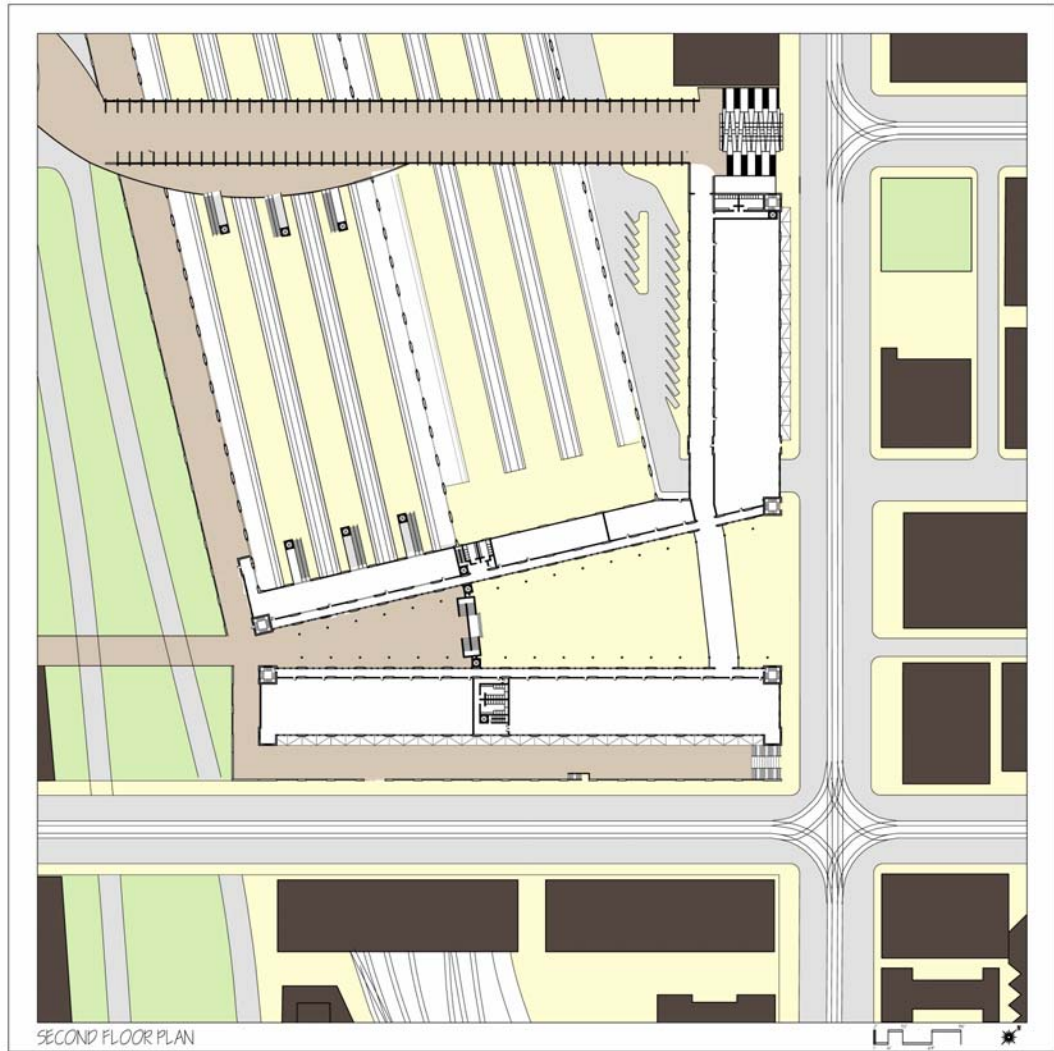


**Figure 50 - Ground Floor Plan**



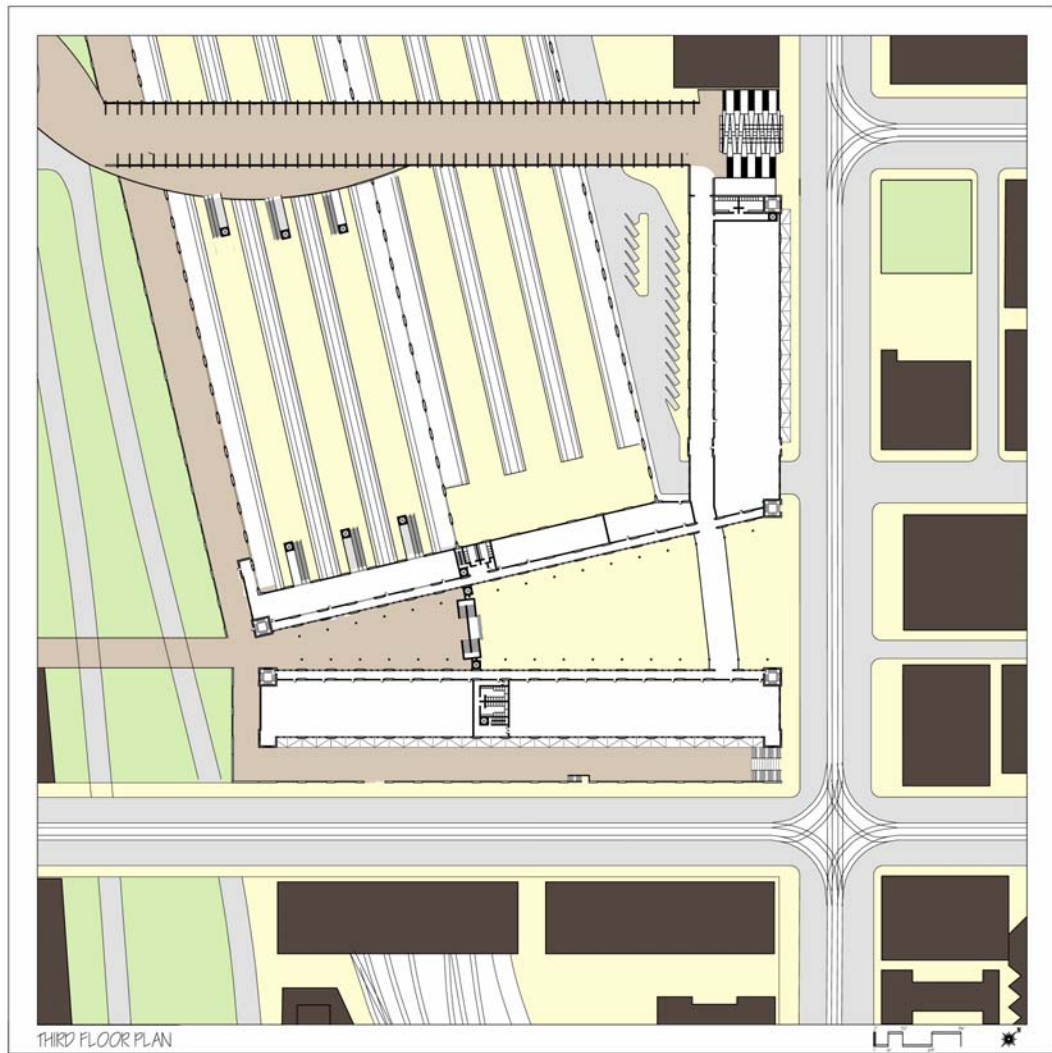


**Figure 51 - First Floor Plan**

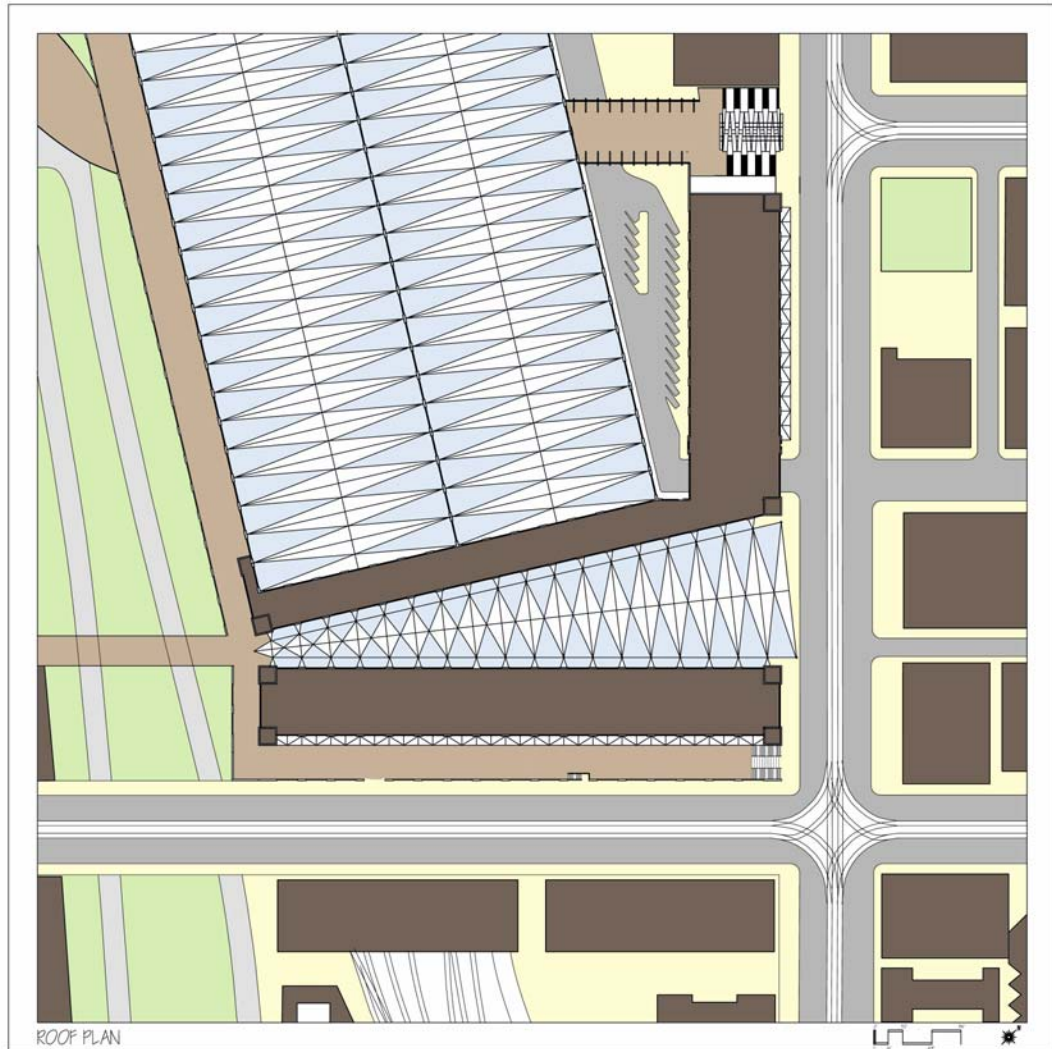


**Figure 52 - Second Floor Plan**





**Figure 53- Third Floor Plan**



**Figure 54 - Roof Plan**



**Figure 55 - Collins Street Facade**



**Figure 56 - Spencer Street Fascade**



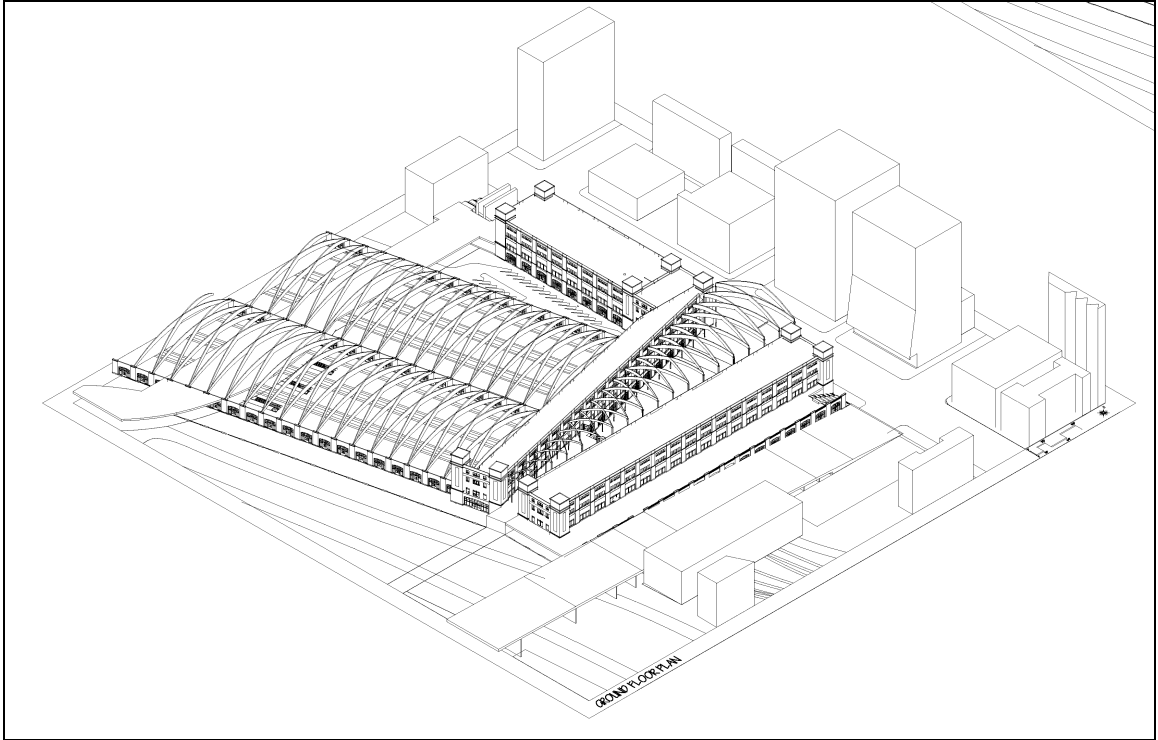
**Figure 57 - Section Through Arcade**



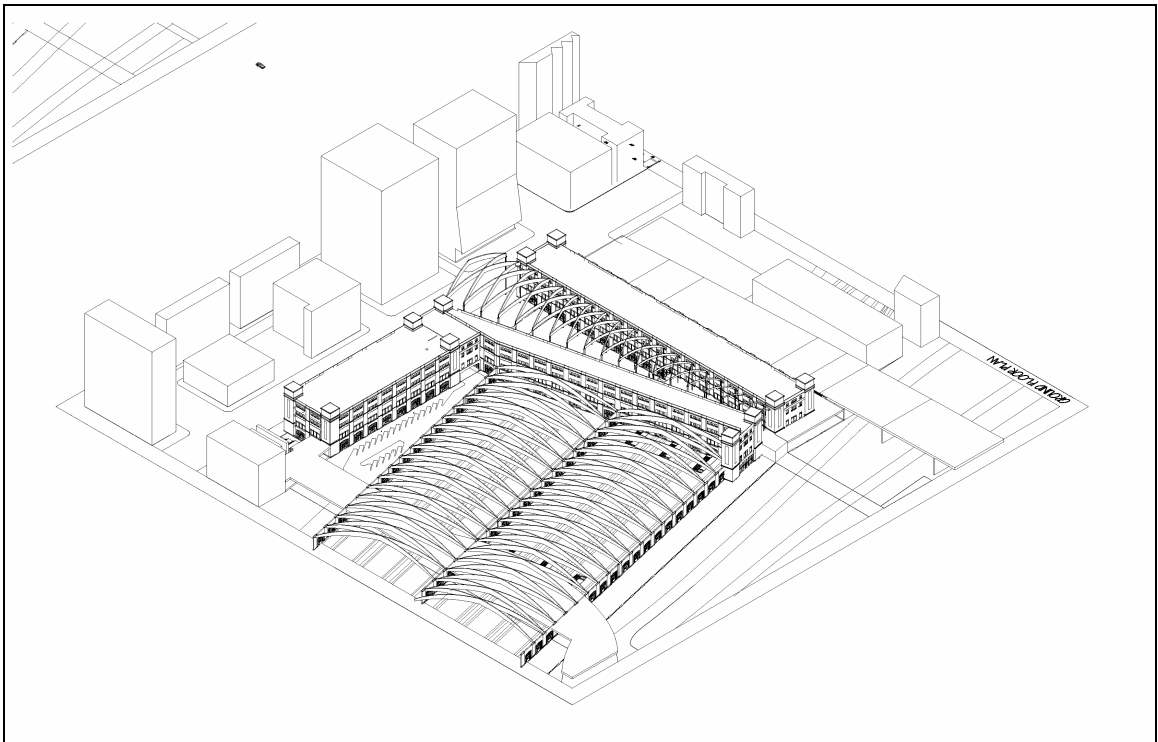
**Figure 58 - Section Through Train Shed**



**Figure 59 - Cross Section Through Train Shed**

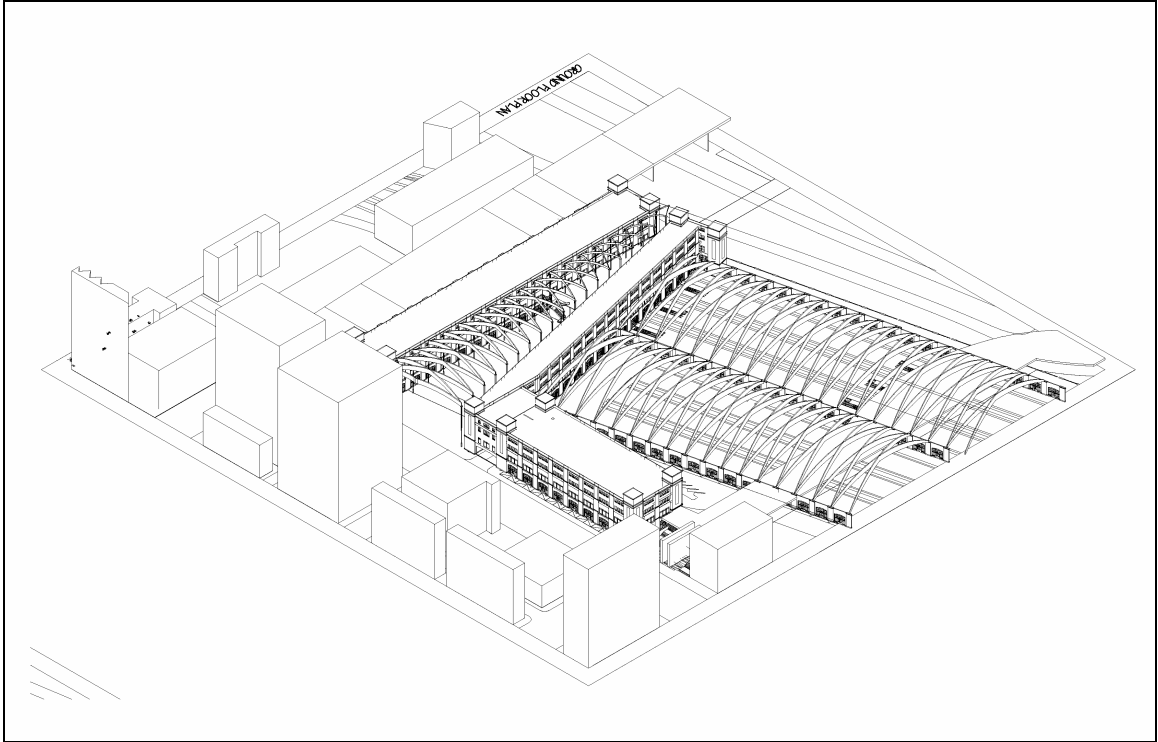


**Figure 60 – Axonometric**

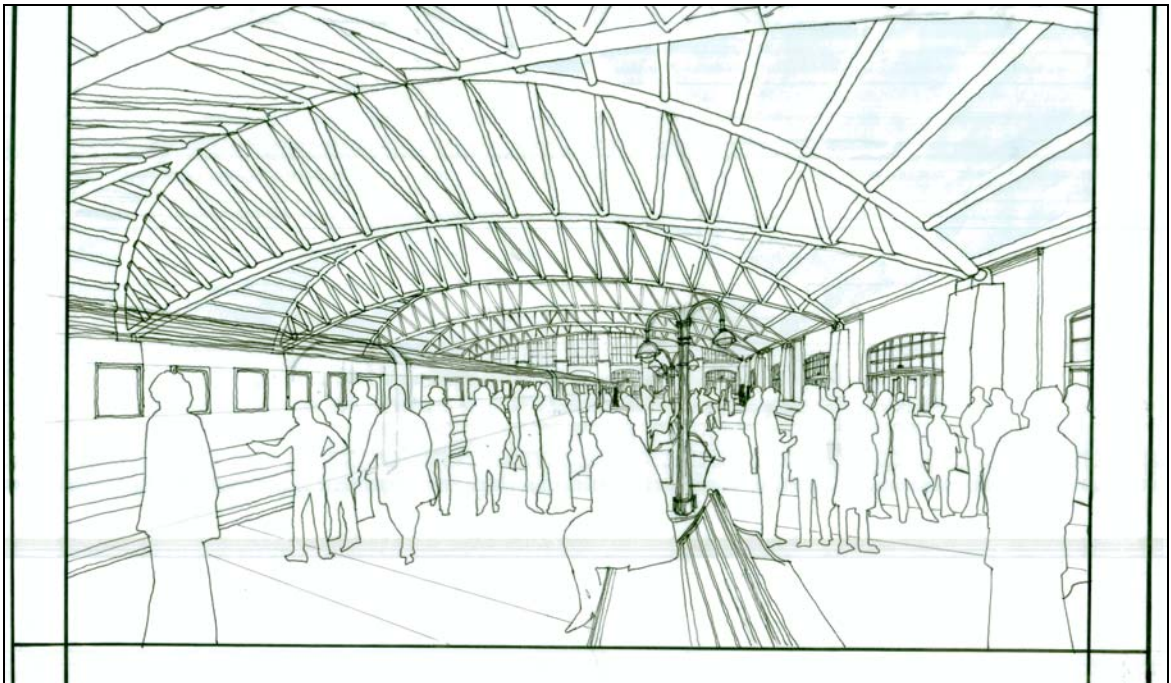


**Figure 61 - Axonometric**

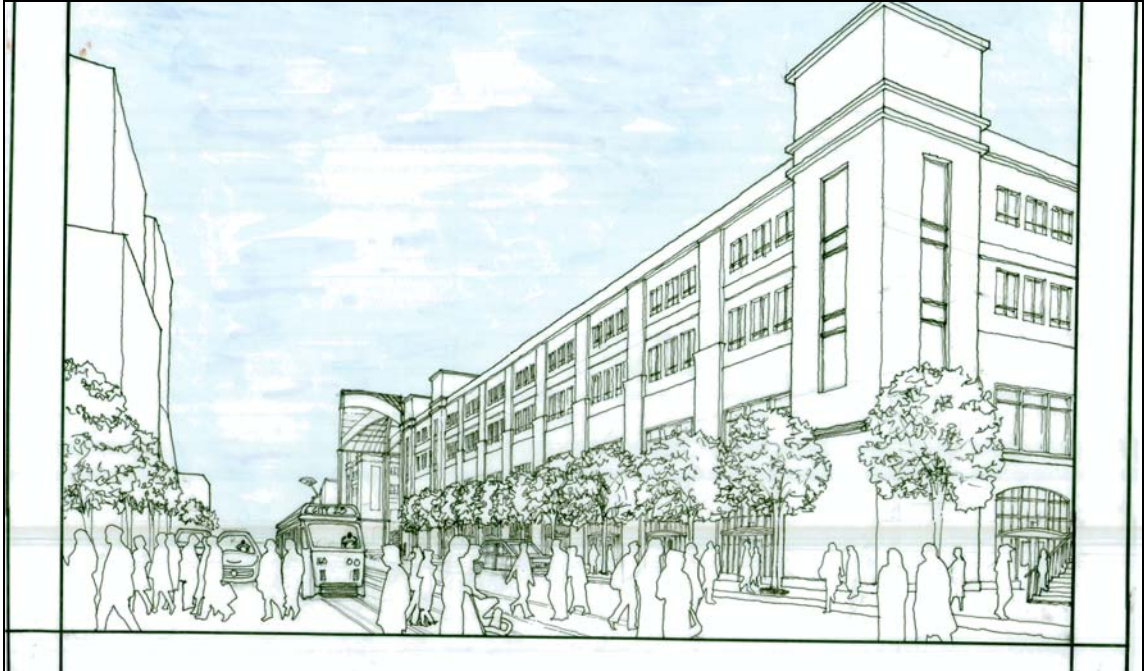




**Figure 62 – Axonometric**



**Figure 63 – Perspective of Interior of Shed**



**Figure 64 – Exterior Perspective**



**Figure 65 – Perspective of Arcade**





**Figure 66 – Perspective of Pedestrian Walk**



**Figure 67 – Exterior Perspective**



**Figure 68 – Facade Development**



**Conclusion**

This project has been a challenge and a massive undertaking. The urban responsibilities of the station are tremendous, as well as its responsibility to provide an imageable building for the city of Melbourne.

Based on the feedback from my thesis advisor and the jury for my defense, I feel the project was successful with regard to connecting the Central Business District with the New Docklands while integrating a traditional building style with new technology. My failure was in redesigning the immediate urban context to accept my building, and I consider that to be rather unfortunate as that redesign would have made my entire argument regarding the arcade and its ability to connect these two disparate parts of the city. Nevertheless, I think that the connection is made through the two level arcade. The arcade opens to the CBD with a broad and grand gesture and the forced perspective within the arcade aids in both introducing the technological aspects of the future city as well as suggesting a major passage between two worlds. This recalls in my mind ideas of the fourth dimension and the temporal aspects of the experience of architecture.

Additionally I believe the project truly creates an edge to the CBD while allowing the previously mentioned connection to occur on a grand scale. The shed and arcade roofs employ technological aspects and fit rather nicely with the traditional building type of the head buildings. Furthermore I have provided pedestrian access as well as mixed use buildings. Finally, I feel that the passenger becomes oriented to the station and therefore the city immediately upon disembarking from the train.

After a rather long journey with this project, I feel rather fortunate that it is now complete and that I can move on to investigate aspects of symbology and their relationship to architecture and building.

## BIBLIOGRAPHY

- Biddle, Gordon, Great Railway Stations of Britain. London: David and Charles, 1986.
- Binney, Marcus, Architecture of Rail. Great Britain: Academy Group Ltd., 1995.
- Binney, Marcus, Great Railway Stations of Europe. London: Thames and Hudson Ltd., 1984.
- Brett, Vivian, Edinburgh. Great Britain: Pitkin Unichrome Ltd., 2001.
- Cerver, Francisco Asencio, Stations and Terminals. New York: Hearst Books International, 1997.
- Edwards, Brian, The Modern Station. Oxford: Alden Press, 1997.
- Handlin, David P., American Architecture. New York: Thames and Hudson Ltd., 1985.
- Jackson, Alan A., London's Termini. New York: Augustus M. Kelley Publishers, 1969.
- Kostof, Spiro, A History of Architecture. New York: Oxford University Press, 1985.
- Meyer, Han, City and Port. Rotterdam: International Books, 1999.
- Morris, A.E.J., History of Urban Form. New York: John Wiley & Sons, 1979.
- Parissien, Steven, Station to Station. London: Phaidon Press Limited, 1997.
- Potter, Janet Greetstein, Great American Railroad Stations. New York: John Wiley & Sons, Inc., 1996
- Trachtenberg, Marvin and Hymen, Isabelle, Architecture. New Jersey: Prentice Hall, 1986

## End Notes

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- <sup>1</sup> Biddle, Gordon, Great Railway Stations of Britain (London: David and Charles, 1986) 85.
- <sup>2</sup> Morris, A.E.J., History of Urban Form (New York: John Wiley & Sons, 1979), 239.
- <sup>3</sup> Brett, Vivian Edinburgh (Great Britain: Pitkin Unichrome Ltd., 2001), 32
- <sup>4</sup> Biddle, *161-63*.
- <sup>5</sup> *ibid*, *164-166*.
- <sup>6</sup> Binney, Marcus, Architecture of Rail (Great Britain: Academy Group Ltd., 1995), 15
- <sup>7</sup> *ibid*, 14.